R E P O R T   R E S U M E S

ED 003 742   64

INSTRUMENTATION FOR INSTRUCTION, 1955-70, VOL. 5--PICTURES.

BY- FINN, JAMES D.
NATIONAL EDUCATION ASSN., WASHINGTON, D.C.

REPORT NUMBER NDEA-VIIB-06905   PUB DATE   60
EDRS PRICE MF-$0.27 HC-$5.92   148P.

DESCRIPTORS- *EDUCATIONAL EQUIPMENT, *PROJECTION EQUIPMENT, *AUDIOVISUAL AIDS, INSTRUMENTATION, LANGUAGE LABORATORY EQUIPMENT, FILMSTRIP PROJECTORS, DISTRICT OF COLUMBIA, TECHNOLOGICAL DEVELOPMENT PROJECT

VARIOUS INSTRUCTIONAL PROJECTION EQUIPMENT WAS PICTURED AND BRIEFLY ANNOTATED IN THIS DOCUMENT. PROTOTYPES OF NEW EQUIPMENT WERE ALSO INCLUDED. OTHER VOLUMES IN THIS SERIES ARE ED 003 738 THROUGH ED 003 746. (TC)

ED003742

B-069

FINAL REPORT

TECHNOLOGICAL DEVELOPMENT PROJECT

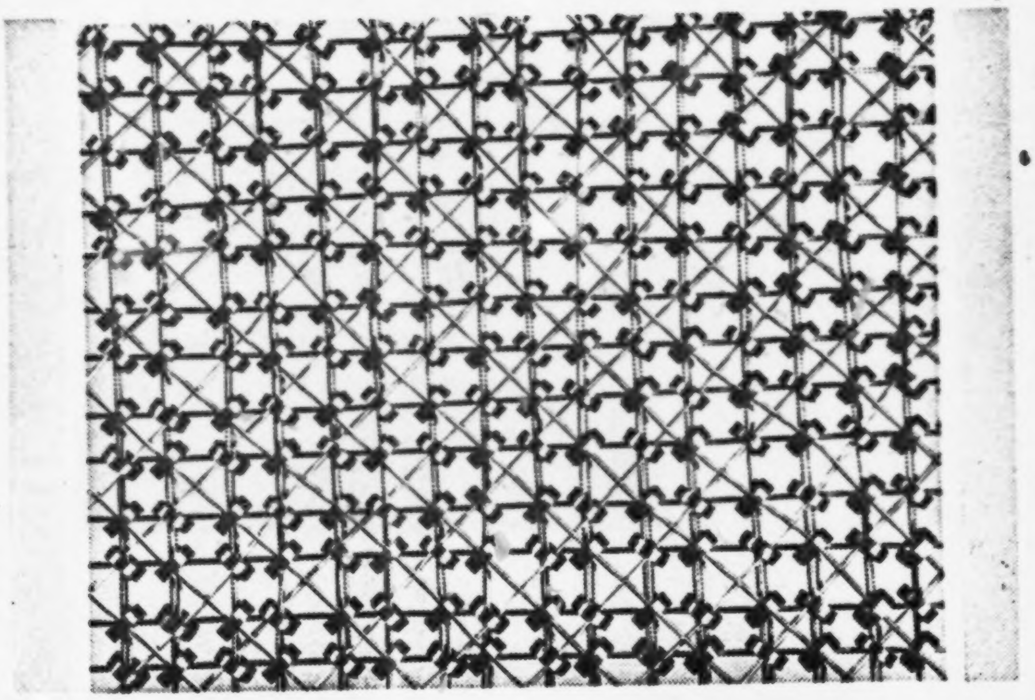
INSTRUMENTATION FOR INSTRUCTION: 1955-1970

Draft Copy for Editing

VOLUME V - PICTURES

Ch. _____ Page _____

Cover Design?



Comparison micro mini

Fig _____

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
Office of Education
This document has been reproduced exactly as received from the person or organization originating it. Points of view or opinions stated do not necessarily represent official Office of Education position or policy.

Neg. No. 129

Ch. ____ Page ____

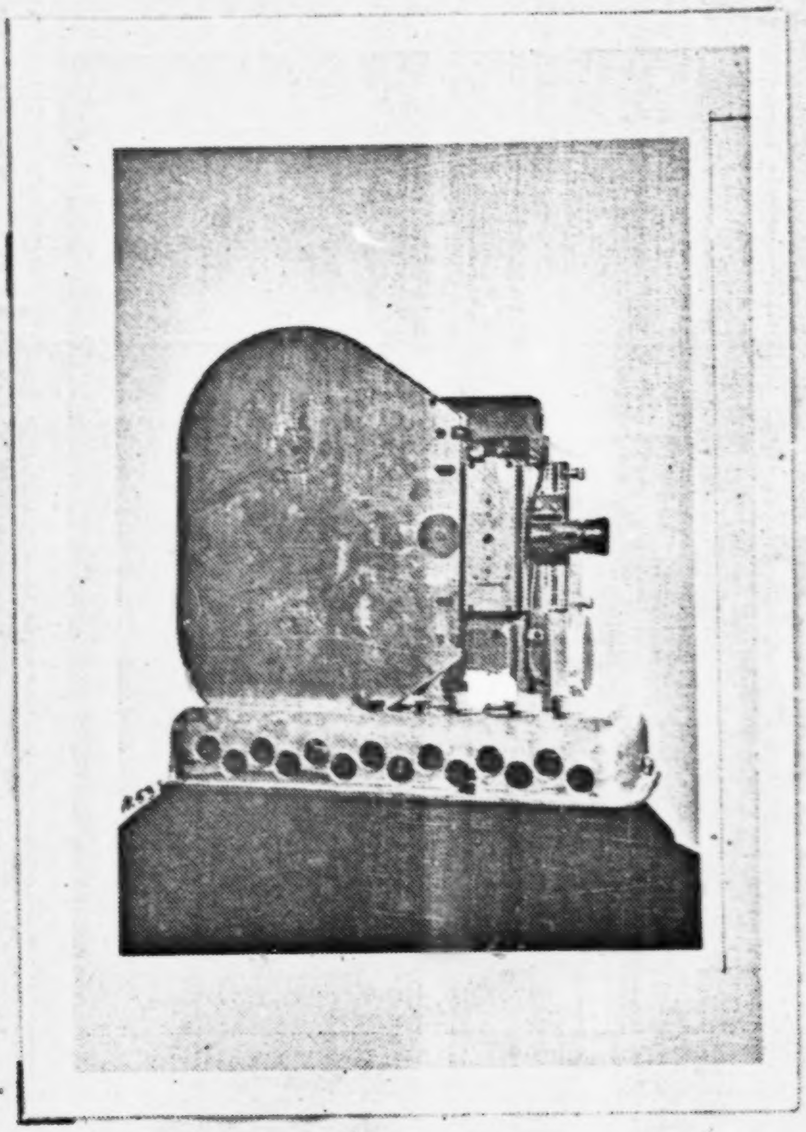
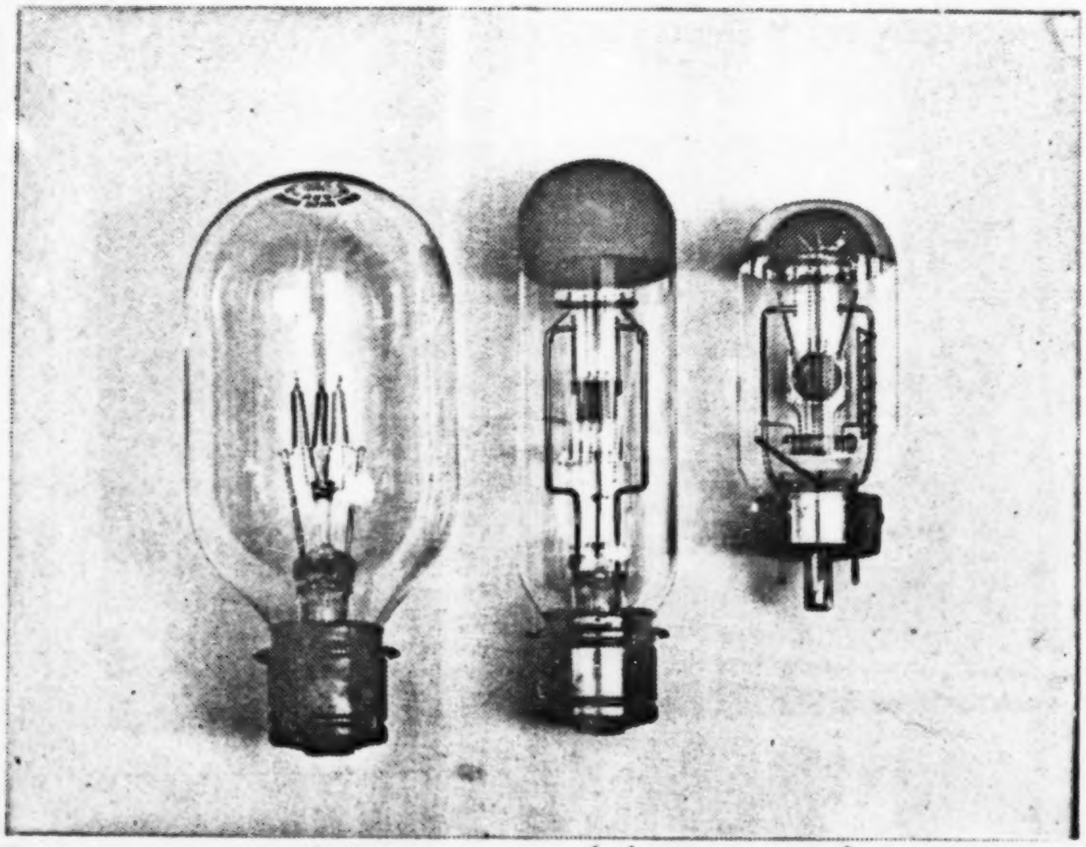


Fig 1aa PROTOTYPE OF A NEW SELF THREADING SOUND MOTION PICTURE PROJECTOR

Neg. No. 402



(1) (2) (3)

Fig. 1. Projection lamps showing progressive reduction in size of typical 500 W units.

Neg. No. 1244

Film Cartridges

Ch. _____ Page _____

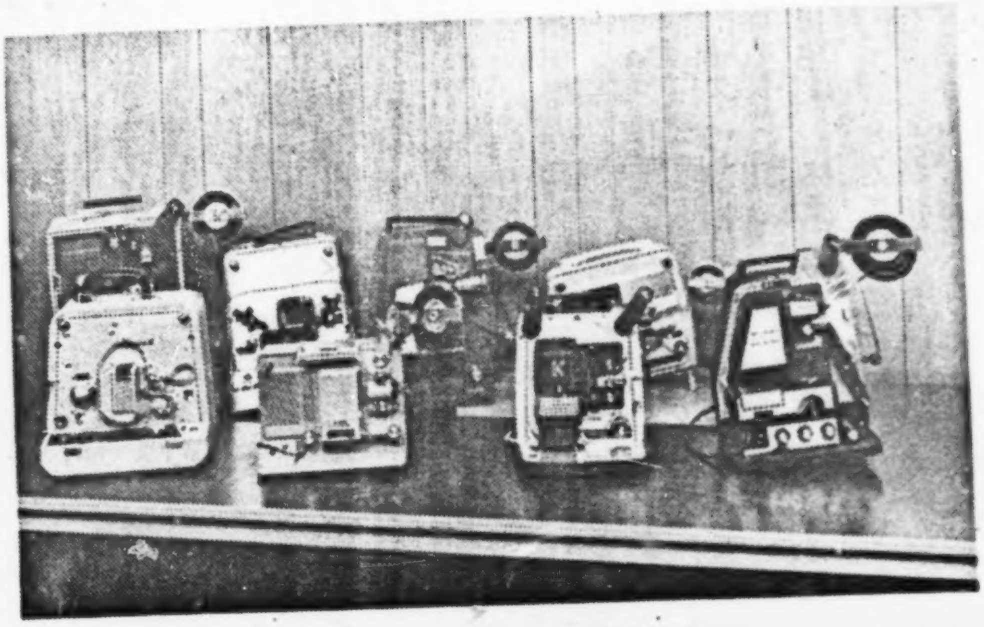


Fig 7 COUSINO

Continuous loop film attachments can be used on almost any conventional projector whether 8 or 16mm.

Neg. No. 1001

Ch. _____ Page _____

Porta-Viewer & Automated Film Cartridge

Fig 8

EXECUGRAF

Neg. No. 688/889?

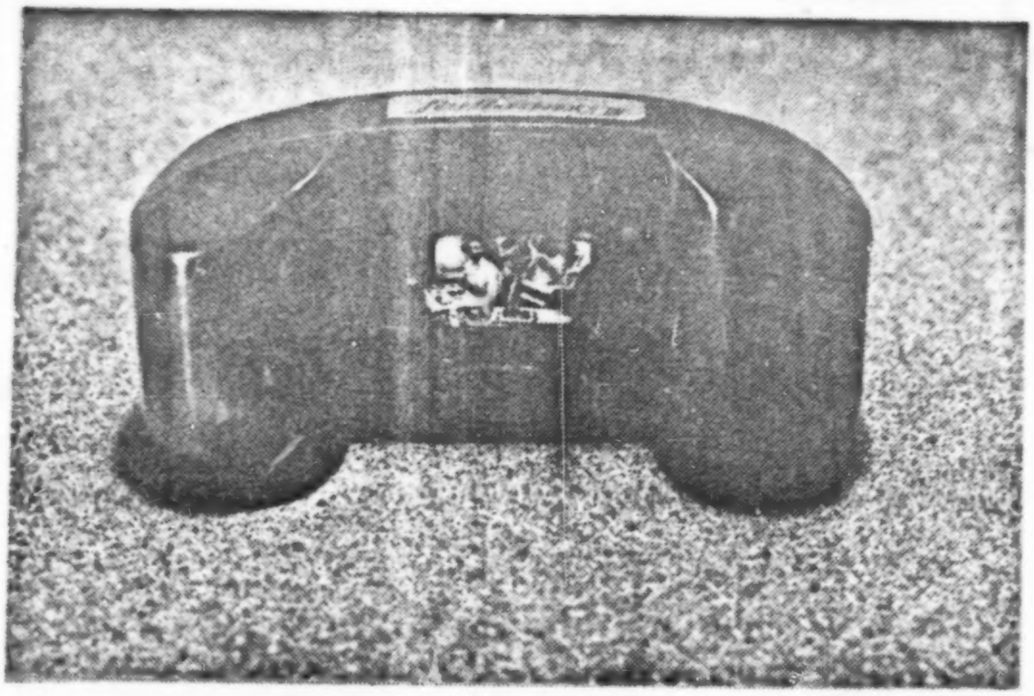
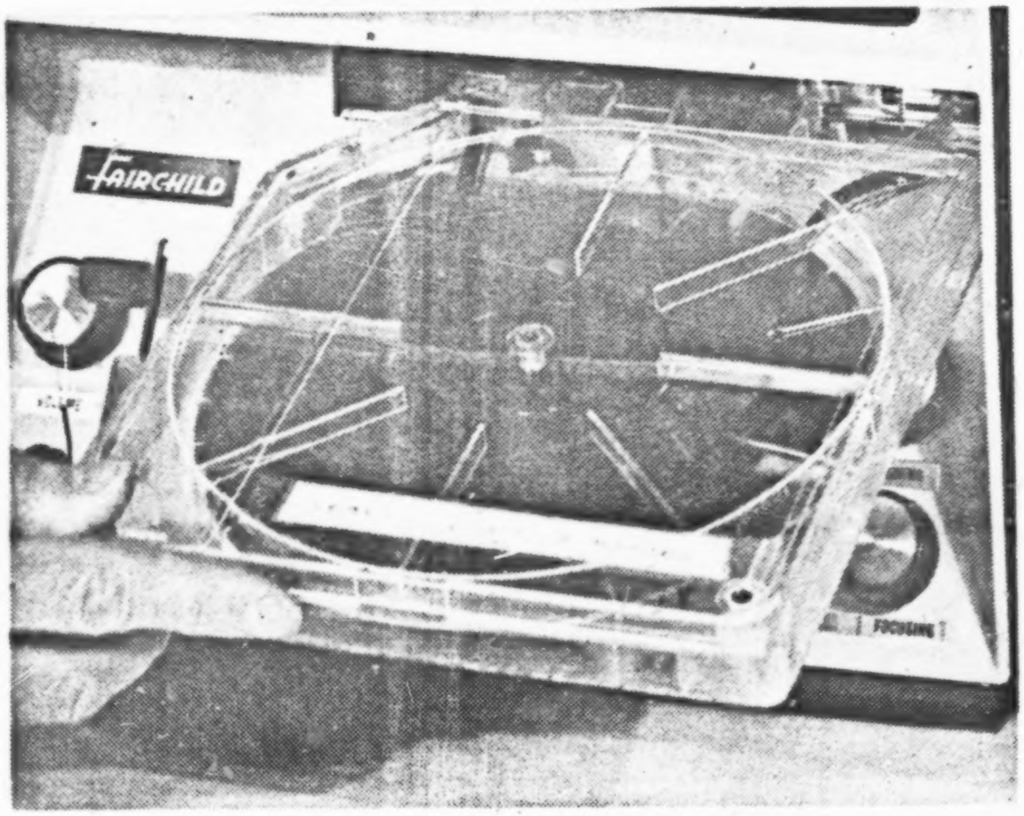


Fig 80 Execugraf Cartridge for double frame 35mm Filmstrip.

Neg. No. 1250

No #9

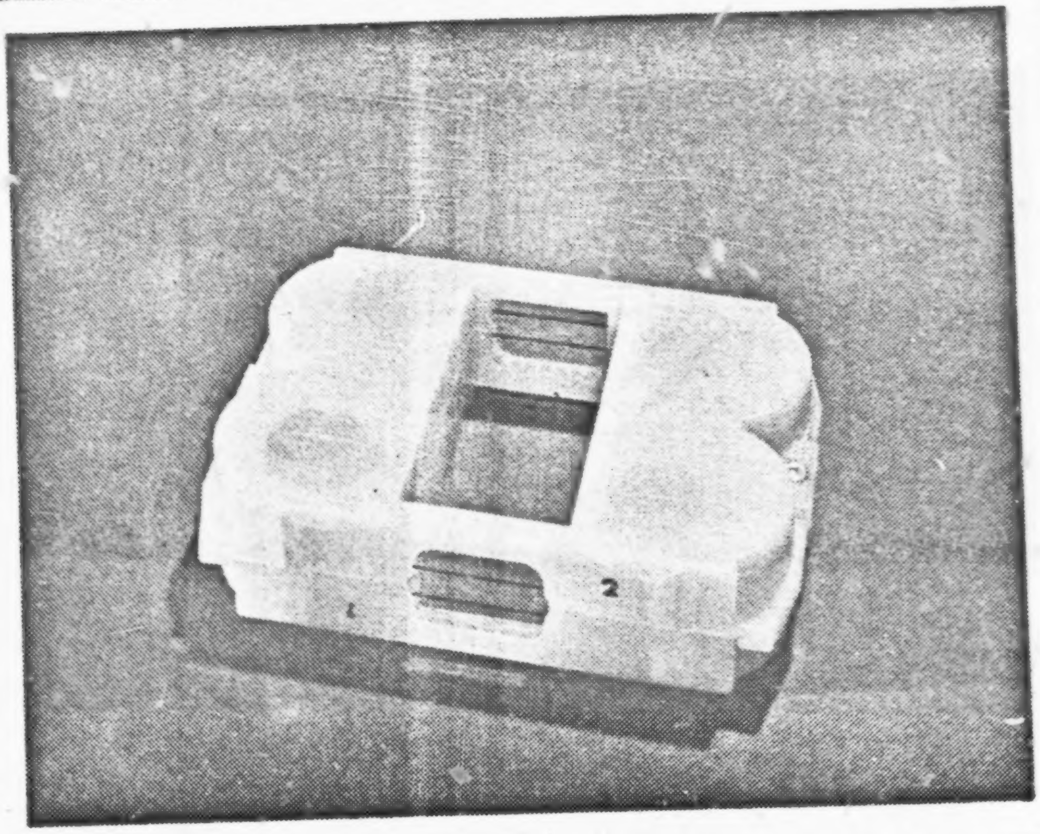


FAIRCHILD CARTRIDGE

Fig 10 Fairchild – only continuous sound cartridge for 8mm.

Neg. No. 1002

Ch. ______ Page ______



MAST

Fig 11 Mast – double cartridge for 35mm filmstrip

Neg. No. 1003

Ch. ______ Page ______

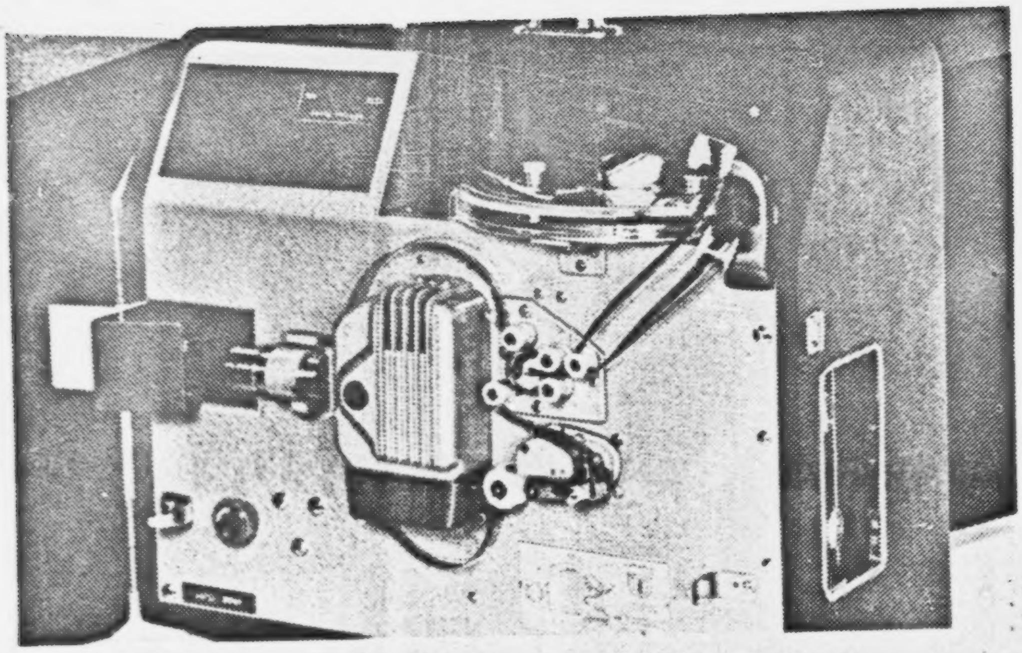
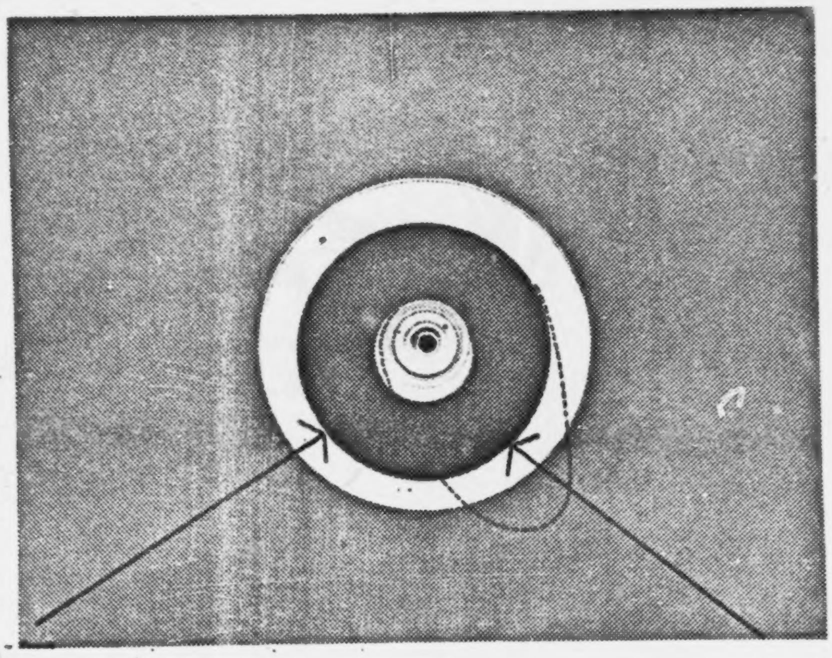


Fig 12

MPD VIDEOTRONICS — projects 8mm sound loop on its own rear view screen.

Neg. No 485

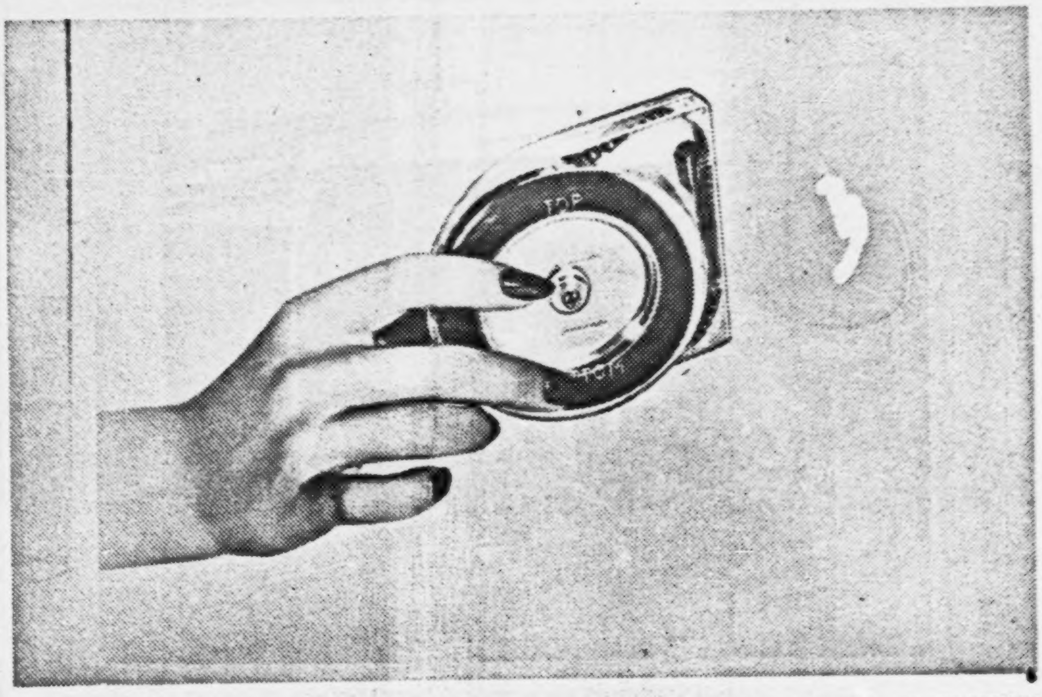
Ch. ____ Page ____



MPO VIDEOTRONICS

Fig 12a MPO Videotronics - showing principle of continuous loop attachment.

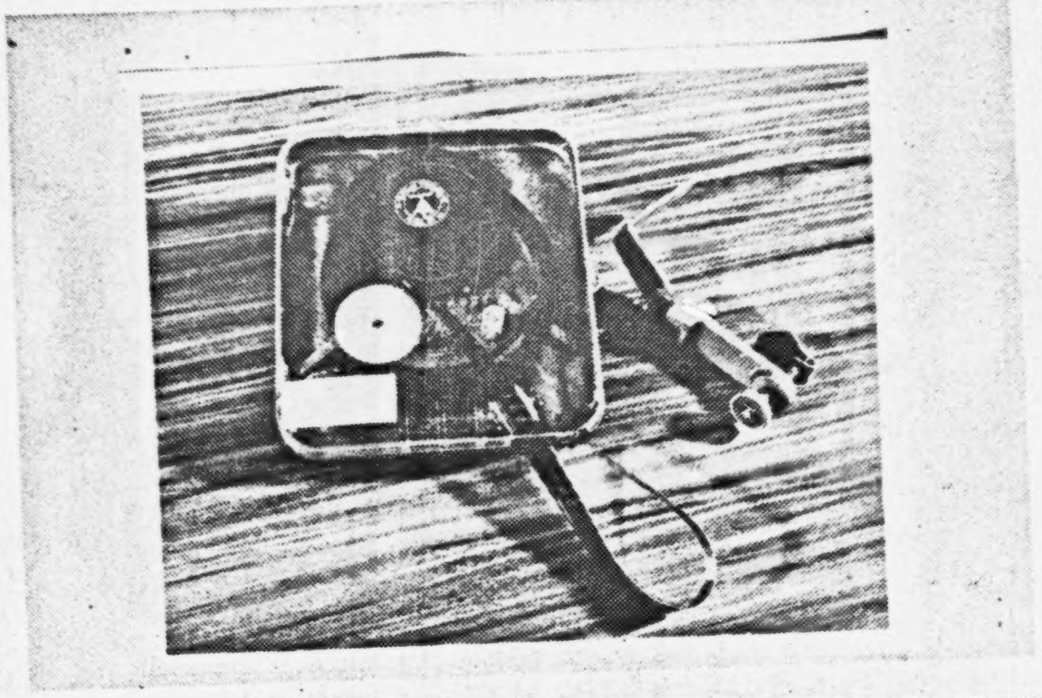
Neg. No. 290



TECHNICOLOR

Fig 13 Techmcolor — 8mm silent film in a continuous loop cartridge.

Neg. No. 12



TV ASSOCIATES — 16mm loop ~~cartridge~~ attachment.

Fig 1c

Neg. No. 533

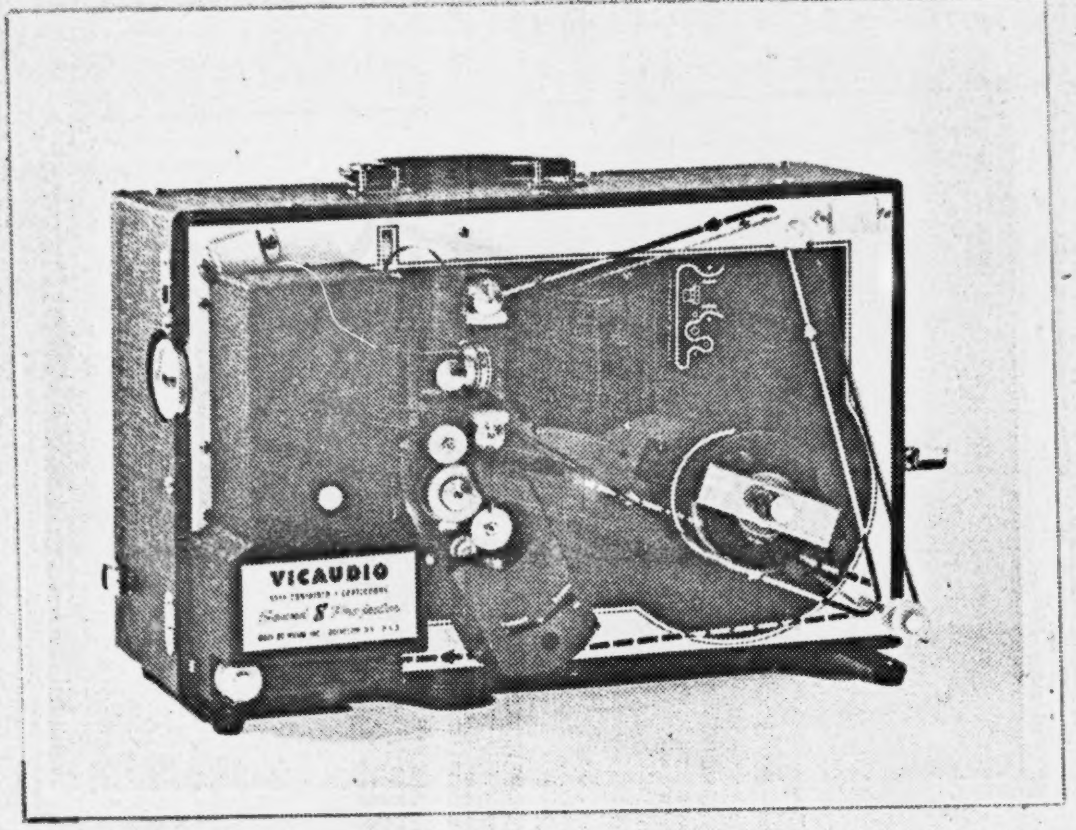
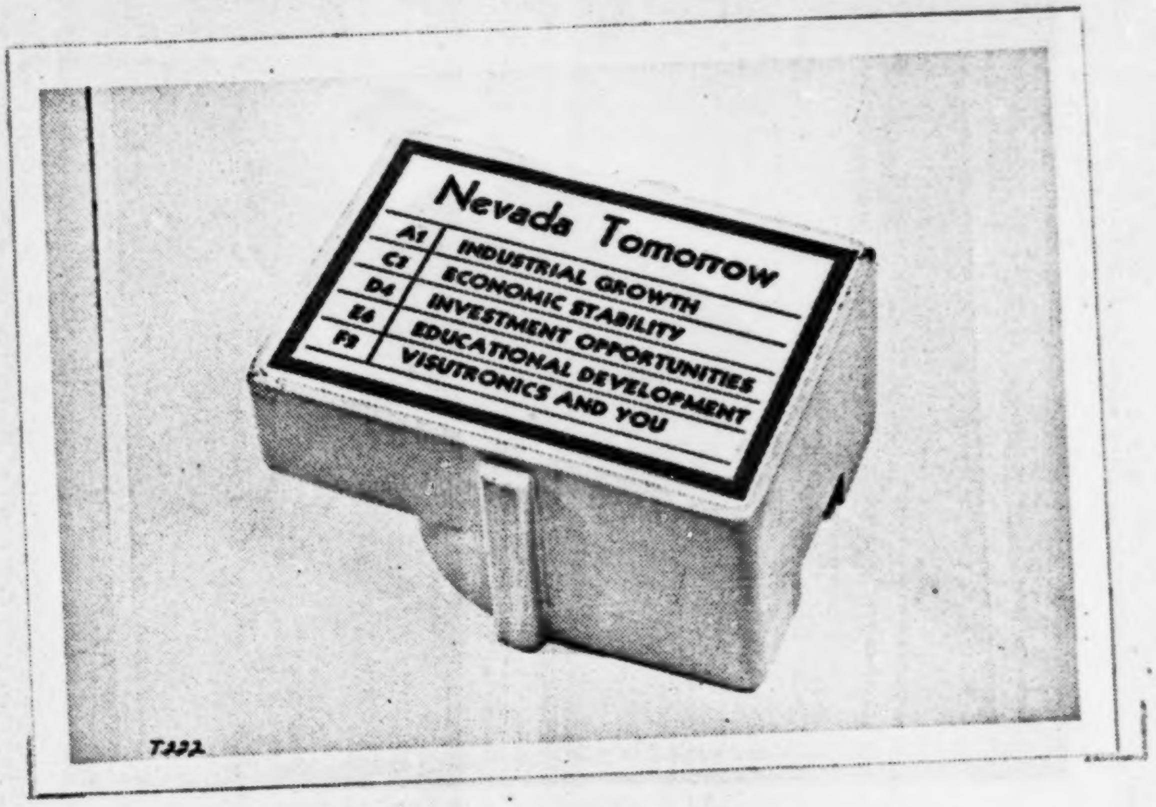


Fig *15* *Projects 8mm sound VICOM loop on own rear view screen.*

Neg. No. *10.04*



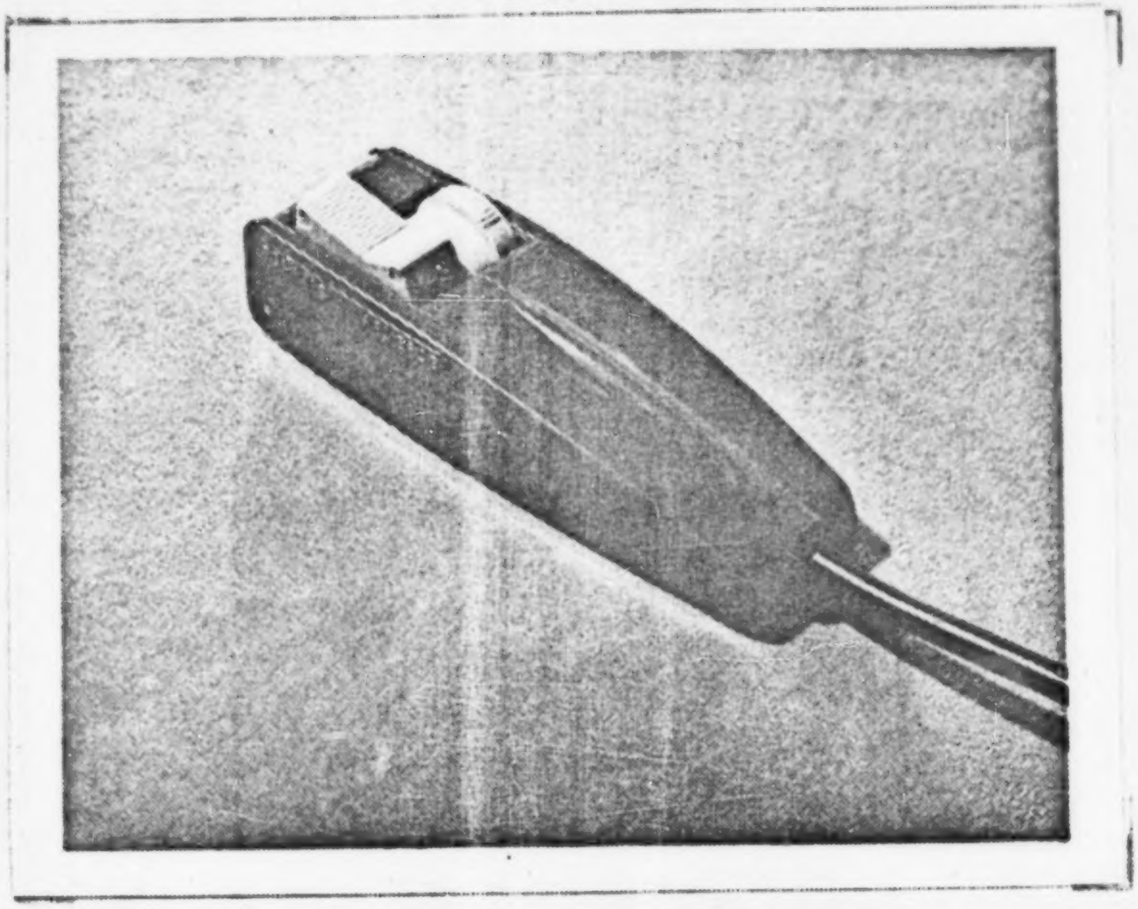
VISUTRONICS —

Fig 16

combination cartridge with 8mm film and 1/4" magnetic tape sound.

Neg. No 80

Ch._____ Page _____

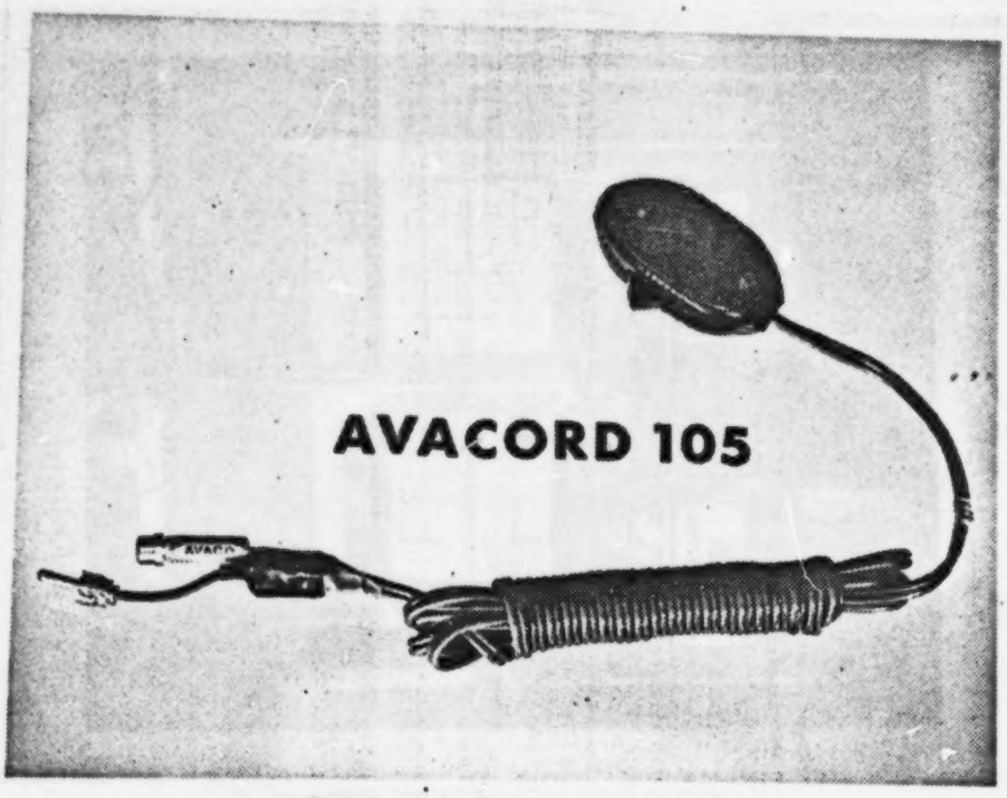


REMOTE CONTROL

Fig 17 Eastman Kodak — remote control for Carousel Slide Projector.

Neg. No. 1005

Ch._____ Page _____



AVACO

Fig 18 Avaco~~rd~~ – remote control extensions for any projector on special order.

Neg. No. 1006

Ch. ____ Page ____

TOP

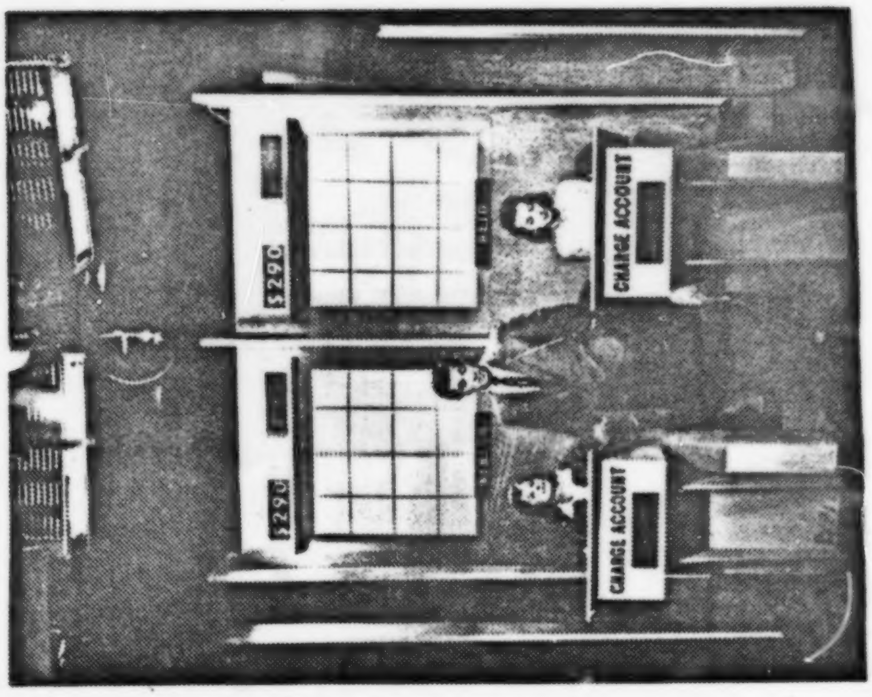


Fig 21 BUHL —

light sources are overhead, ~~while~~ mirror systems are beneath platform.

Neg. No 120

Ch. ______ Page ______

Fig 22

Argus - rear projection console for slides

Neg. No 123

Ch. _____ Page _____

TOP

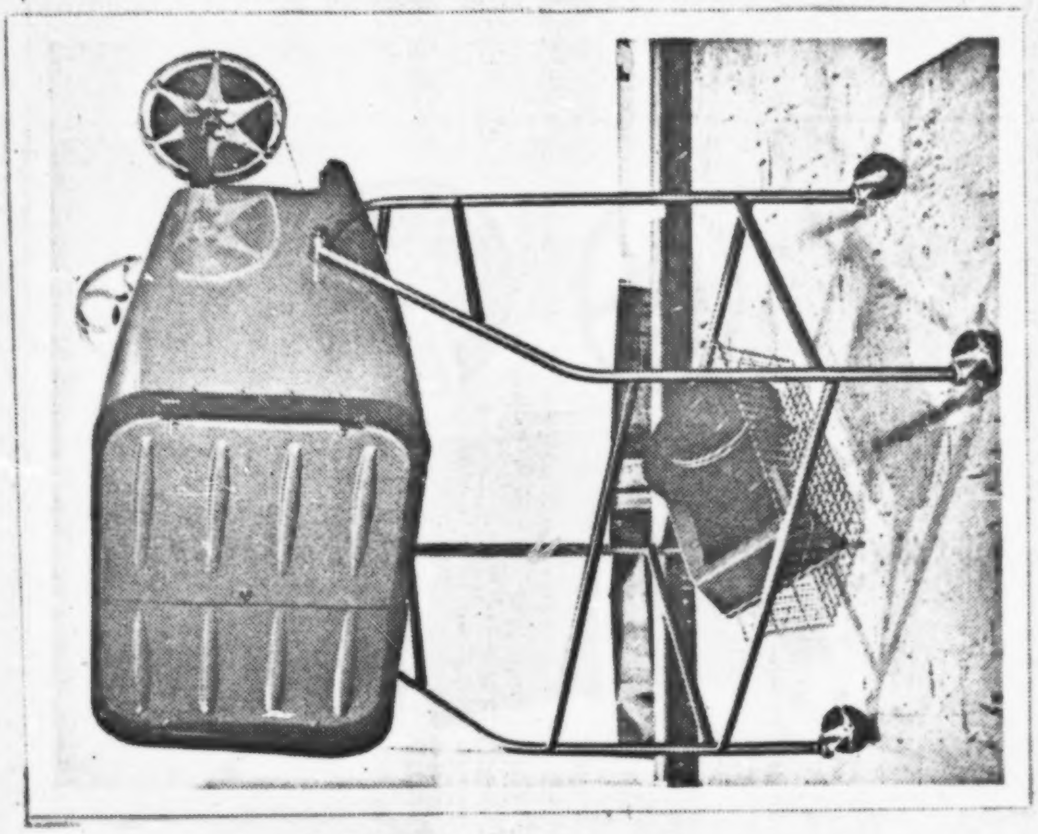


Fig 23

HOOVER BROTHERS —
rear projects 16mm motion
pictures

Neg. No 1007

Ch. ______ Page ______

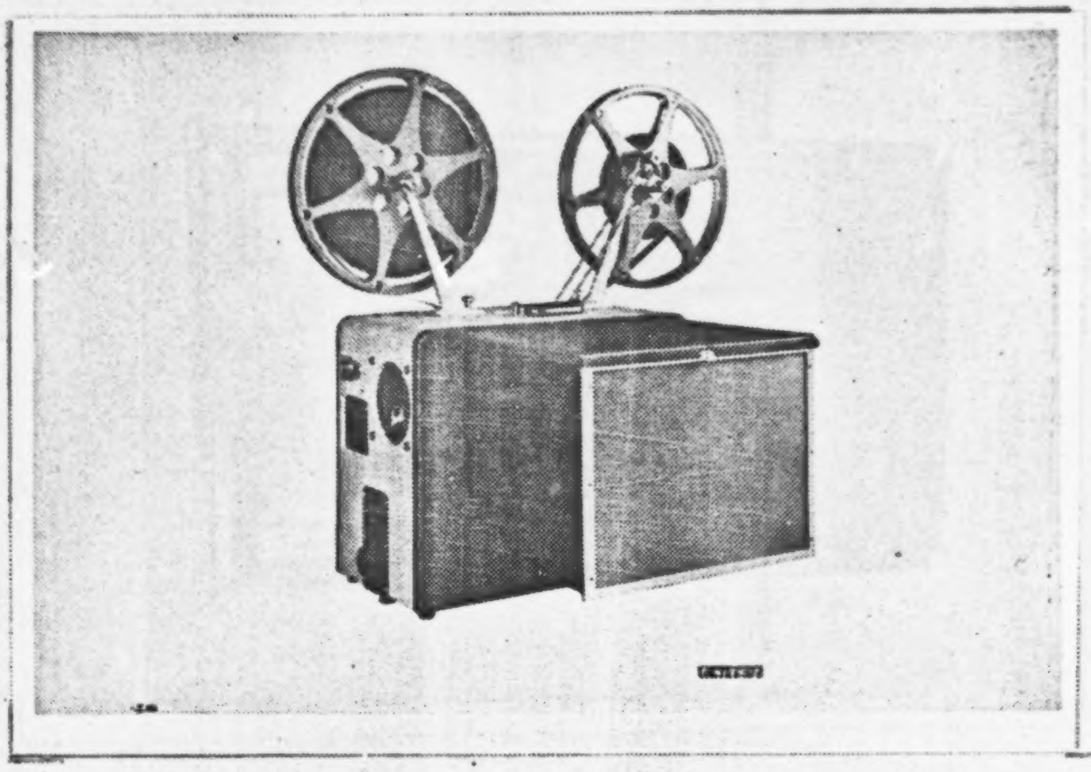


Fig 24

KALART-VICTOR — integral folding rear projection screen.

Neg. No 383

Ch. ____ Page ____

TOP

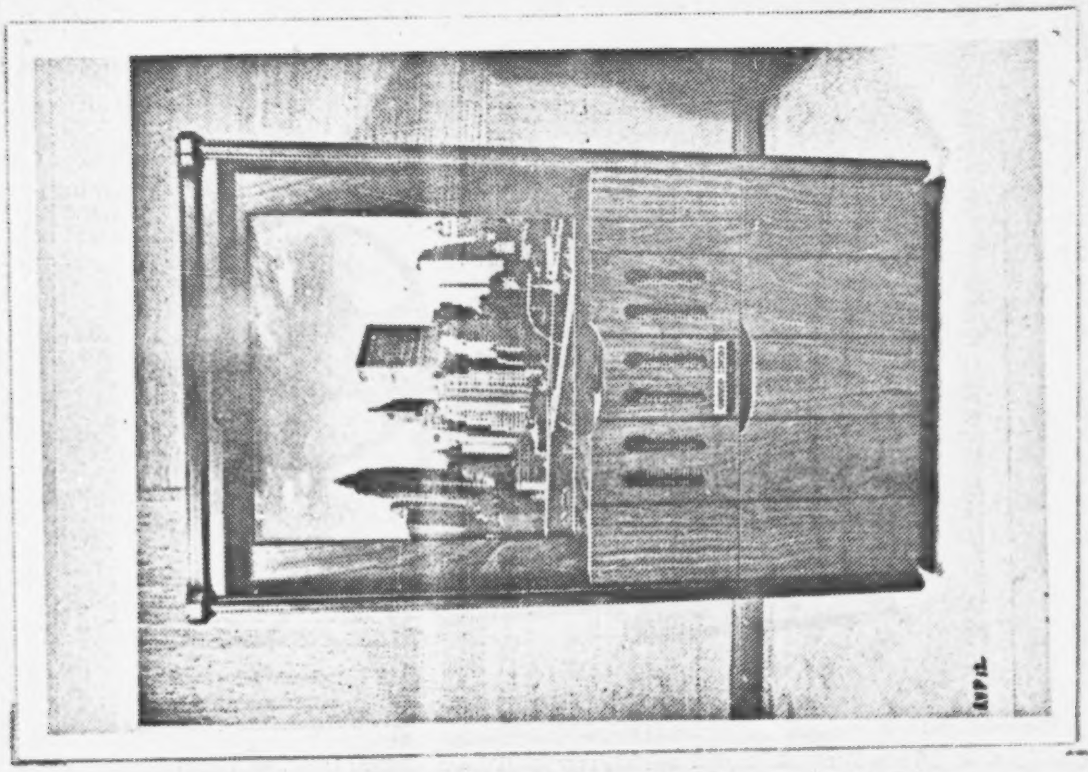


Fig 25

LESTER DINE —

uses Carousel projector and tape recorder

Neg. No 124

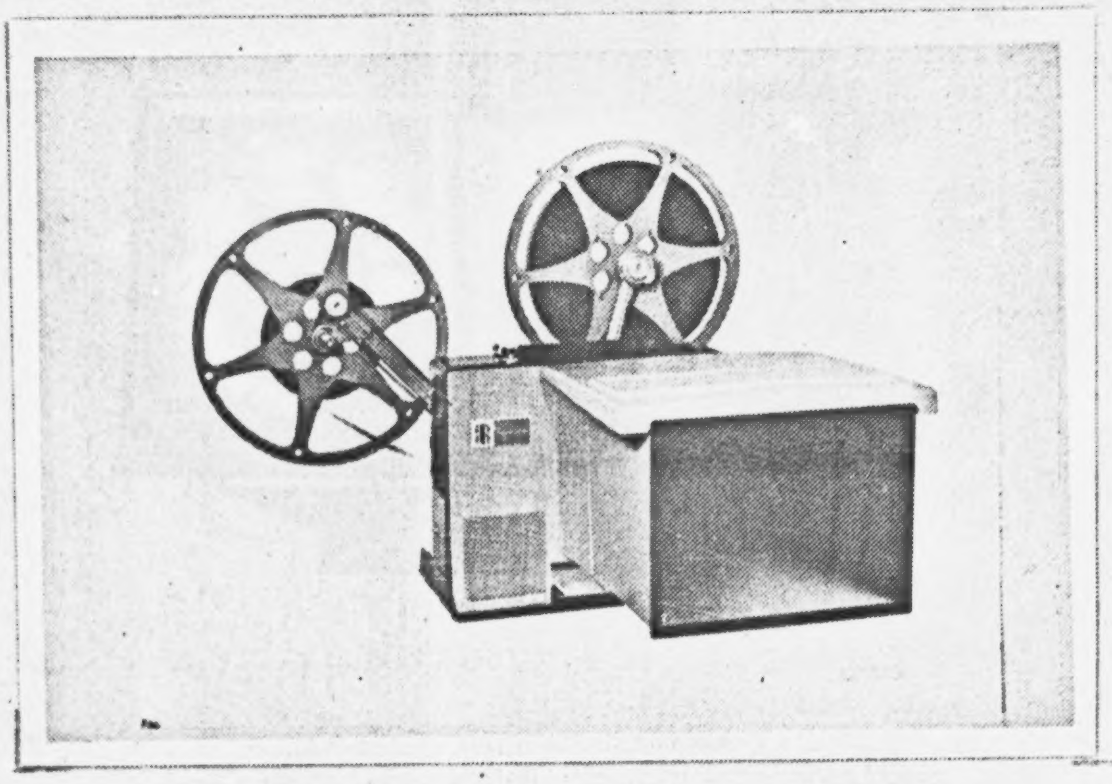
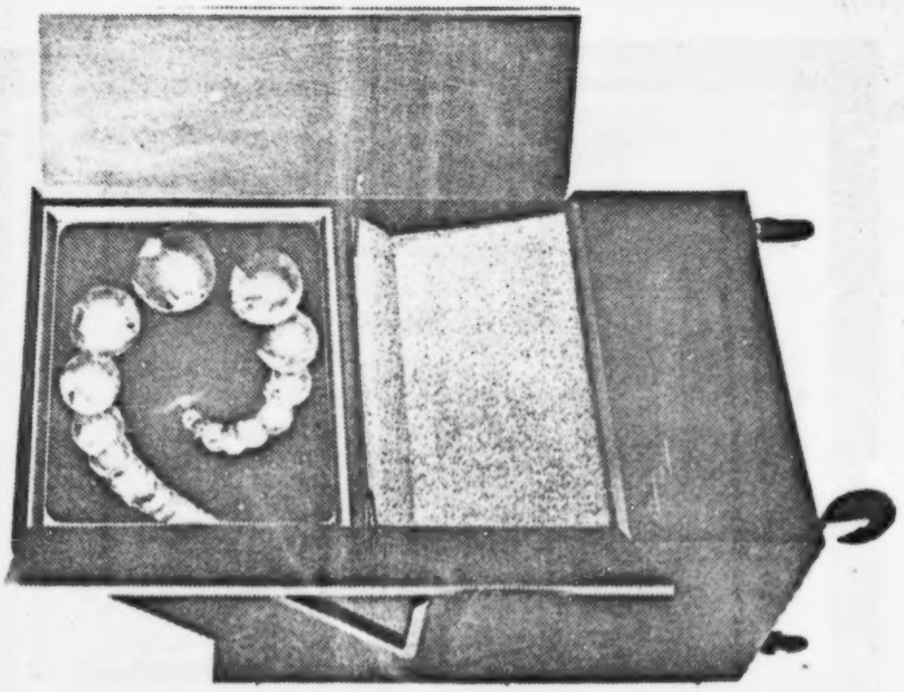


Fig 26

MOVIE-MITE — integral rear projection fold-away screen.

Neg. No 380

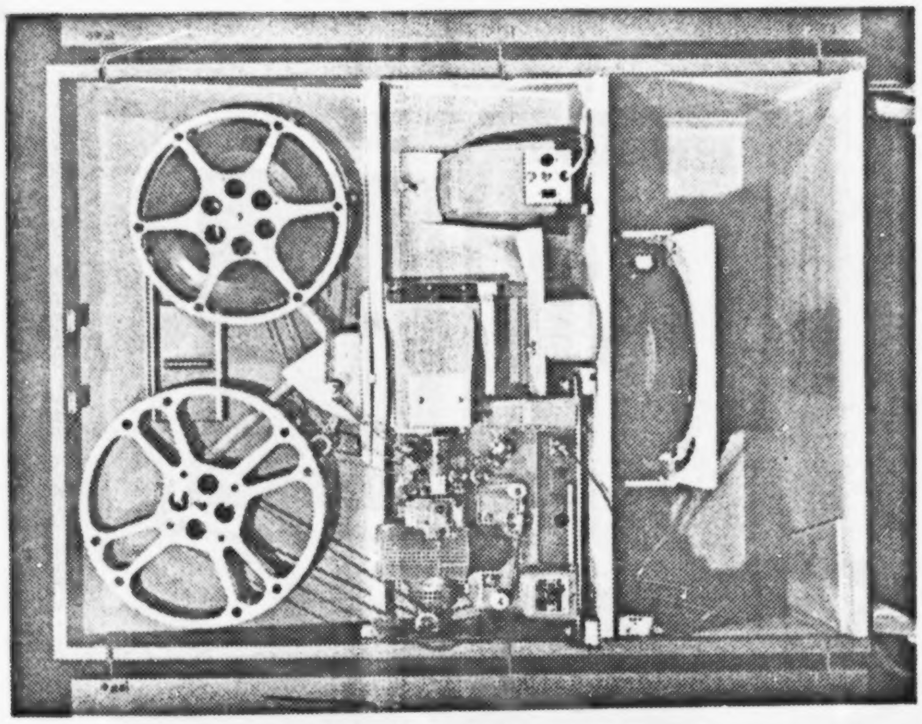
TOP



B1-F1

Fig 27a (FRONT-VIEW) — motion pictures, slides, records.

Neg No 1008



B1-F1
(rear view).

Fig 27b.

Neg. No 1009

Ch._____ Page _____

TOP

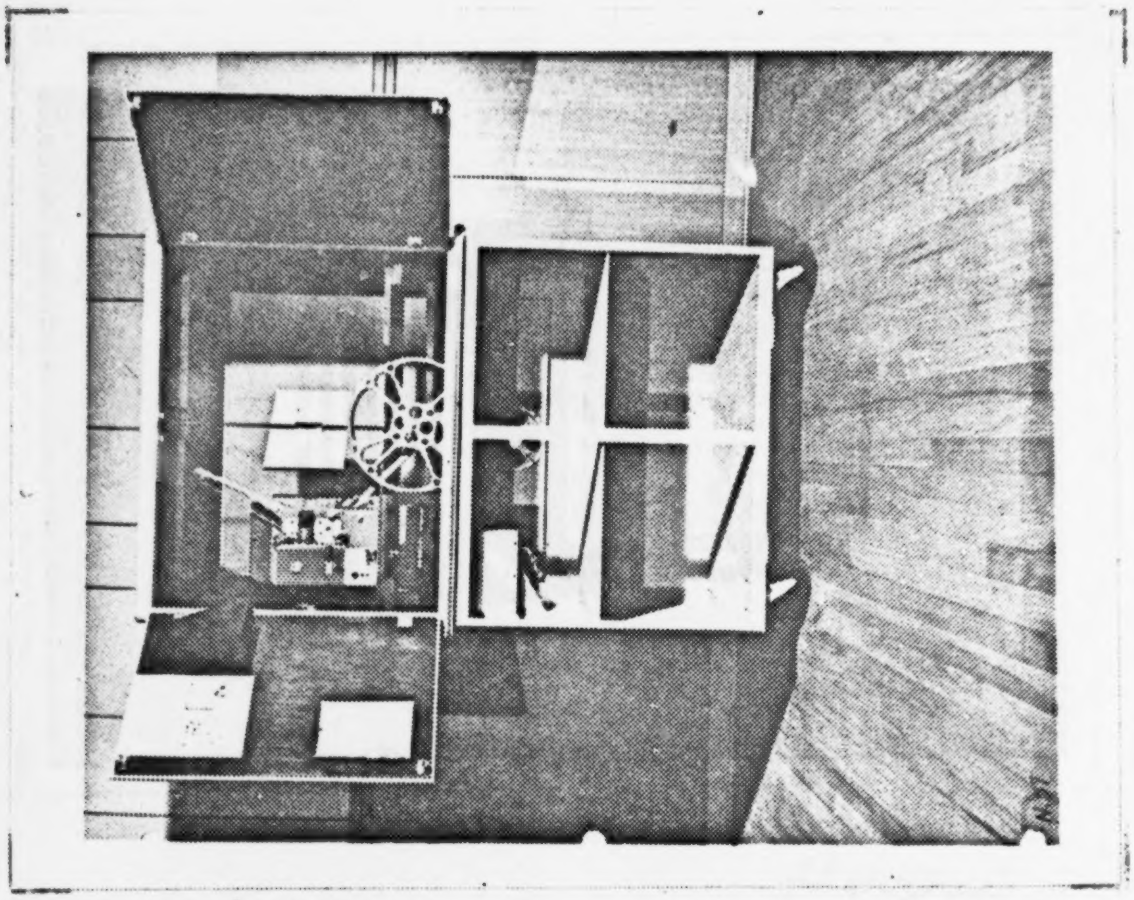
Fig 28a

Busch – cabinet can accommodate a variety of equipment and has storage space for materials.

Neg. No. 1011

Ch.______ Page ______

TOP



Busch

Fig 28 b.

Neg. No. 1010

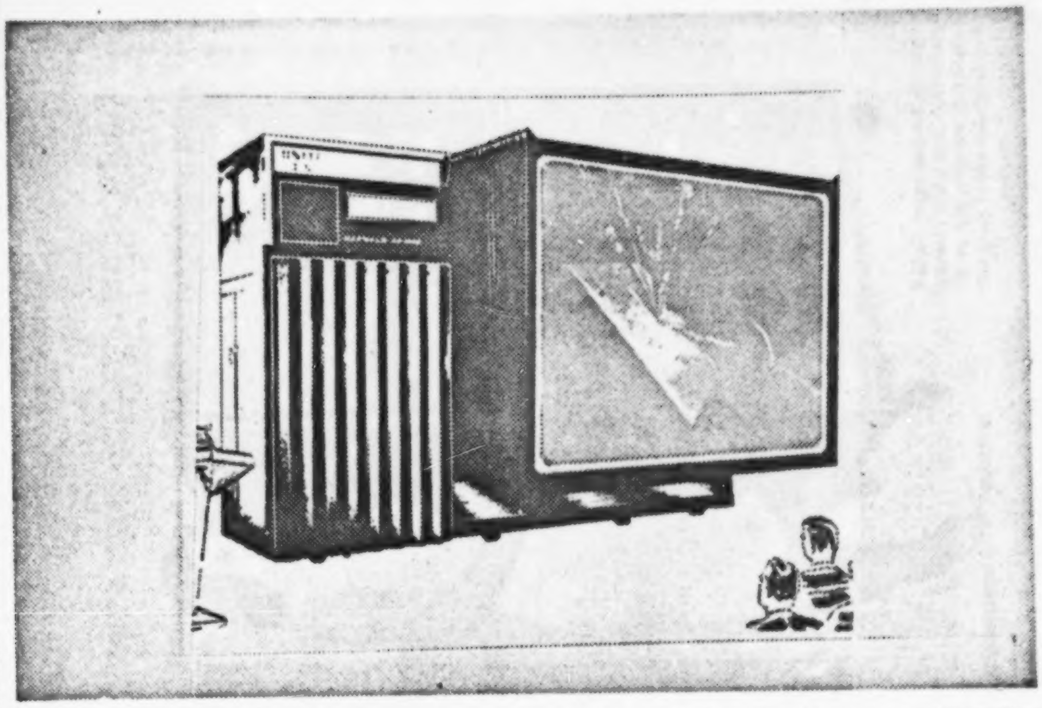


Fig 29

HARWALD – unit for auditoriums and large group situations.

Neg. No 436

Ch. ______ Page ______

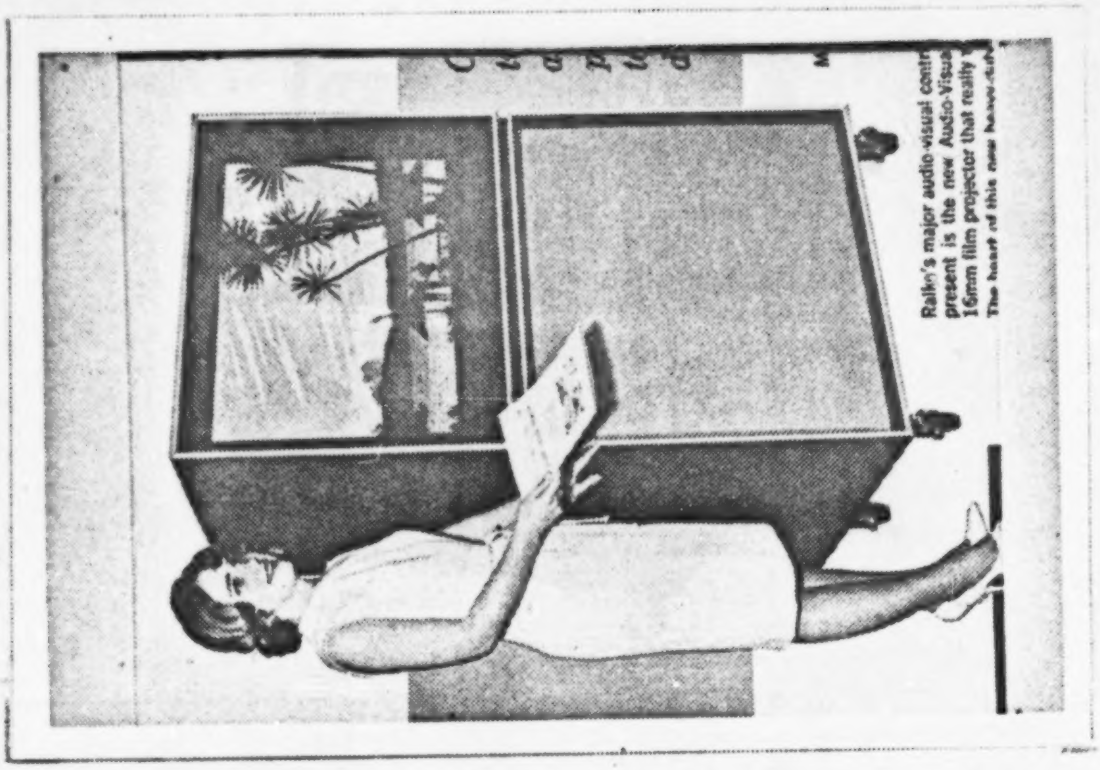


Fig 30?

RALKE — heavy duty unit for films and slides.

Neg. No 487

Fig 31

Staples Hoppmann — overhead projector and remote control features give added flexibility

Neg No 395

Ch. ______ Page ______

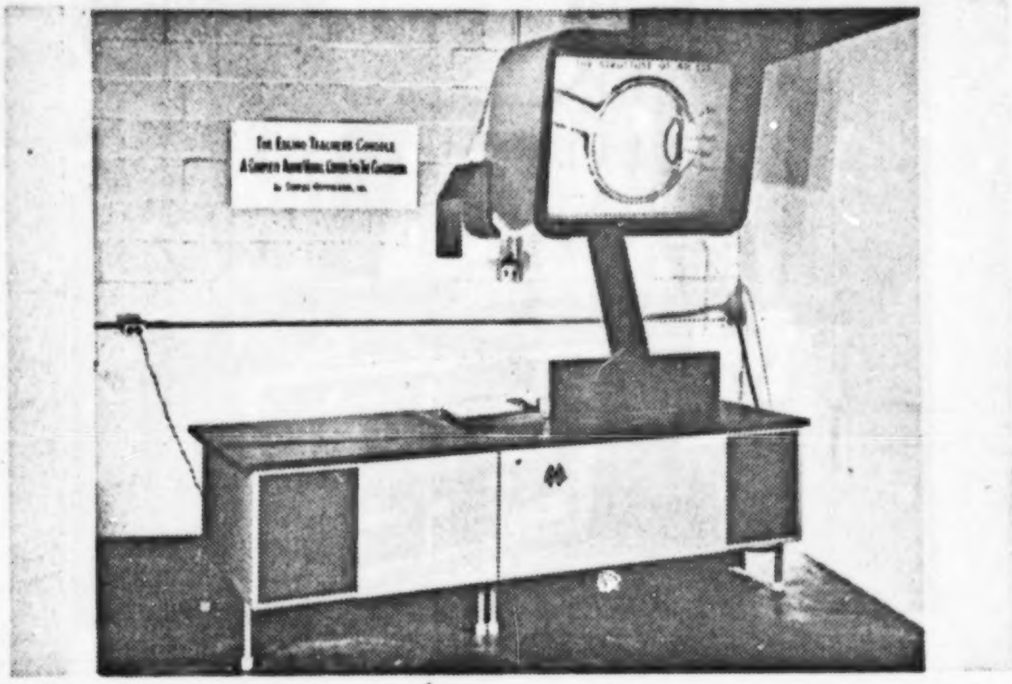


Fig 32a

STAPLES HOFFMANN
EDLING CONSOLE
(front view). — complete
A-V capability built into
the teacher's desk.

Neg. No. 122

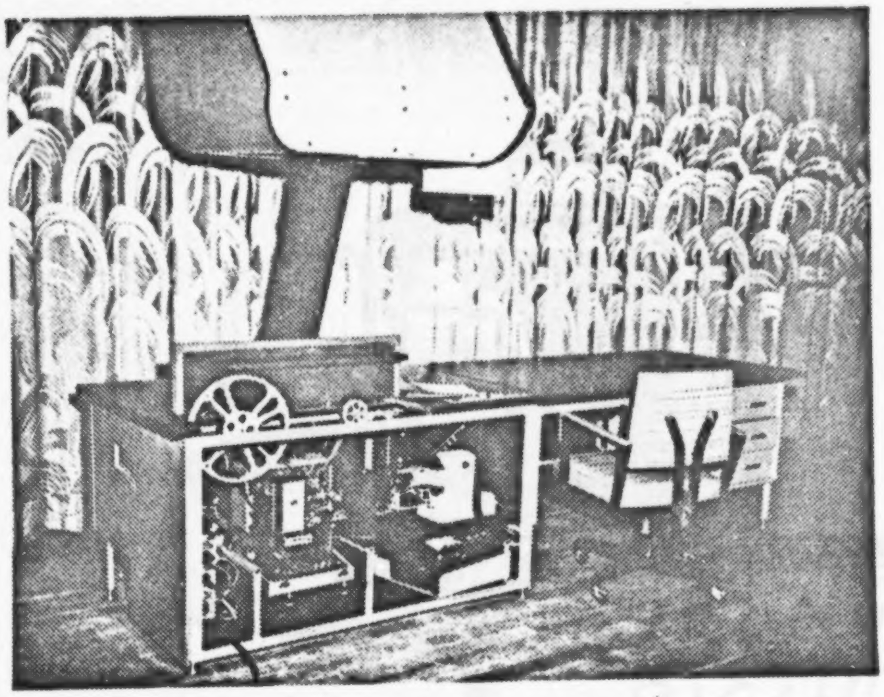
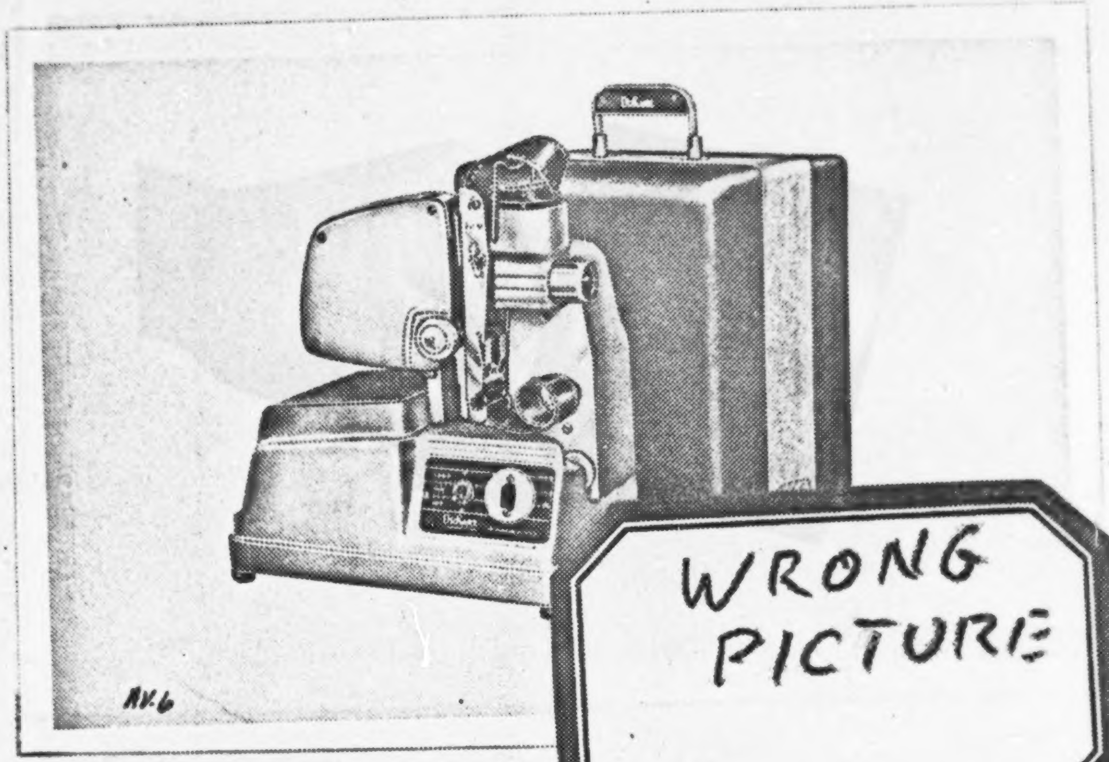


Fig 22b.

Staples-Hoffmann Editing Console (rear view). - shows layout and accessibility to equipment.

Neg. No 121

Wrong Pic



DuKane

Fig 33

Sound FILMSTRIP PROJECTOR — advances automatically on inaudible cue from record.

Neg. No. 7

Ch. ______ Page ______

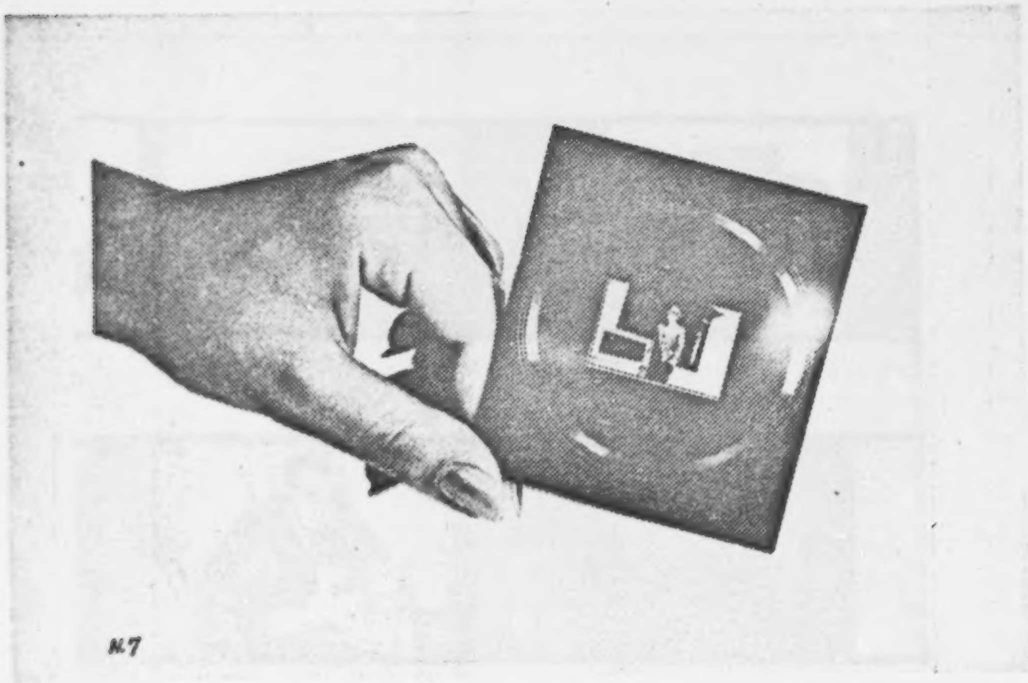


Fig. 34

GRAY SOUND SLIDE — has groove recording in plastic slide mount.

Neg. No. 26

Ch. ______ Page ______

Fig 36.

KALART SOUND FILMSTRIP —
double frame filmstrip uses
alternate frames of optical sound.

Neg No 452

Ch. ______ Page ______

Fig 37

KALART SOUND FILMSTRIP PROJECTOR — requires no threading; has automatic advance and remote control.

Neg No. 401

Ch._____ Page_____

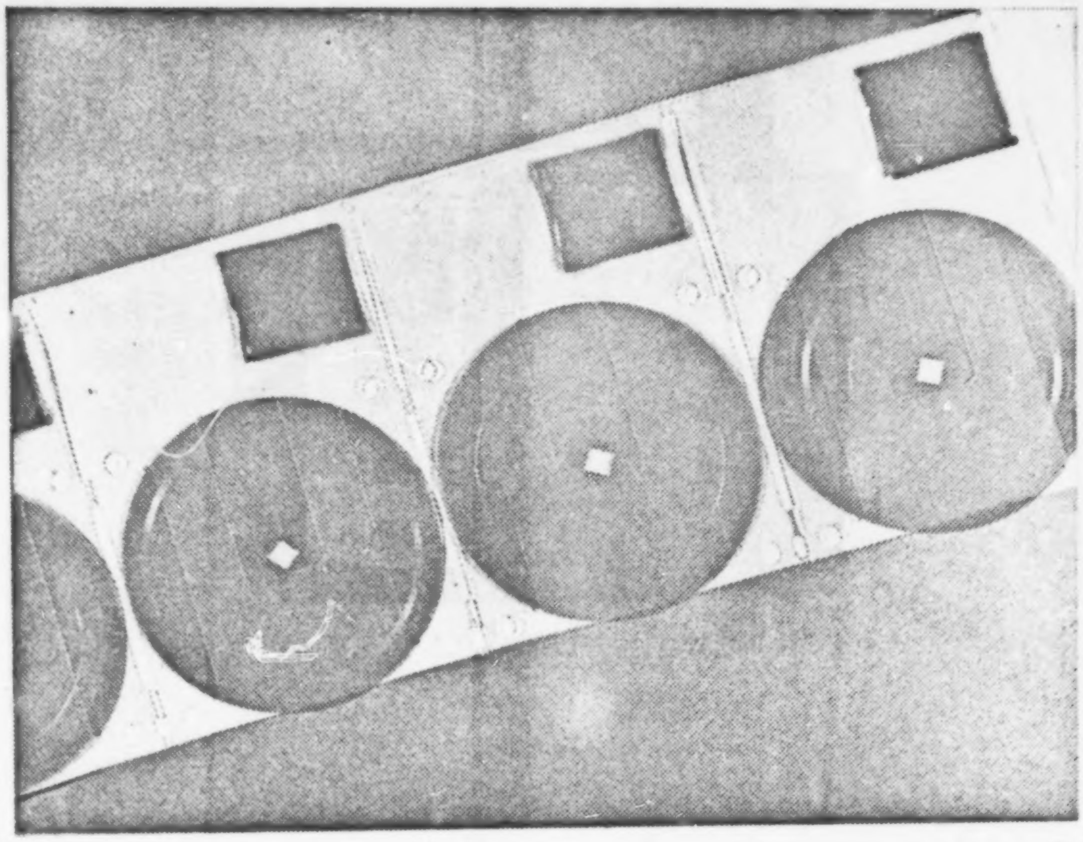


Fig. 38 Instructors Inc — dictation machine discs accompany each slide

Neg. No. 1245

TOP

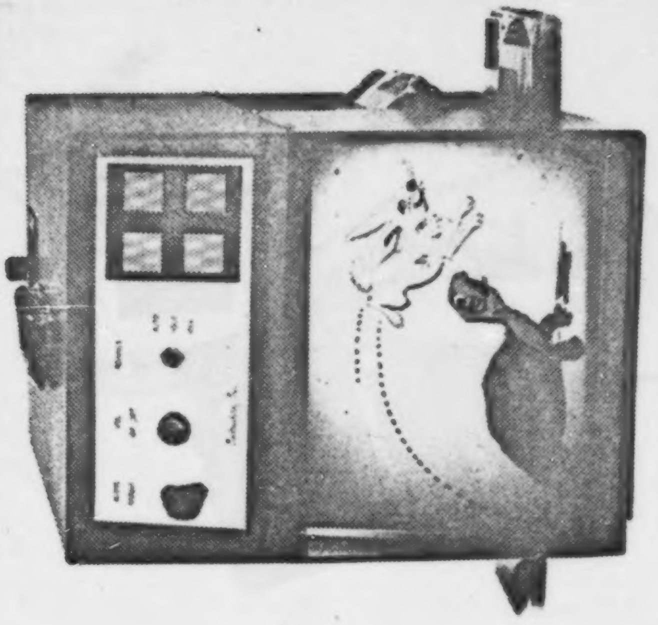


FIG 39

INSTRUCTORS INC
PROJECTOR — fan-folded discs and slides feed automatically.

Neg. No 379

REVERE (3-M) SOUND SLIDES —
slide mounted in magnetic card

Fig 40

Neg. No 410

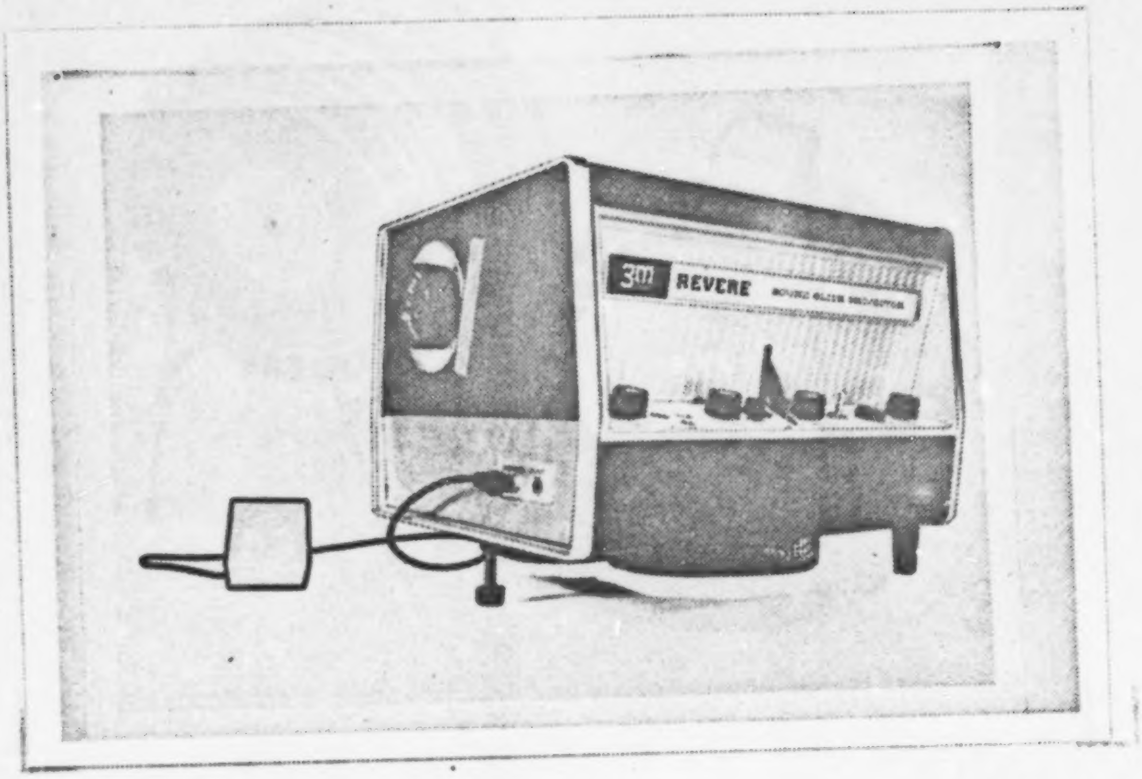


Fig. 41

REVERE SOUND PROJECTOR — records and plays back

Neg. No. 454

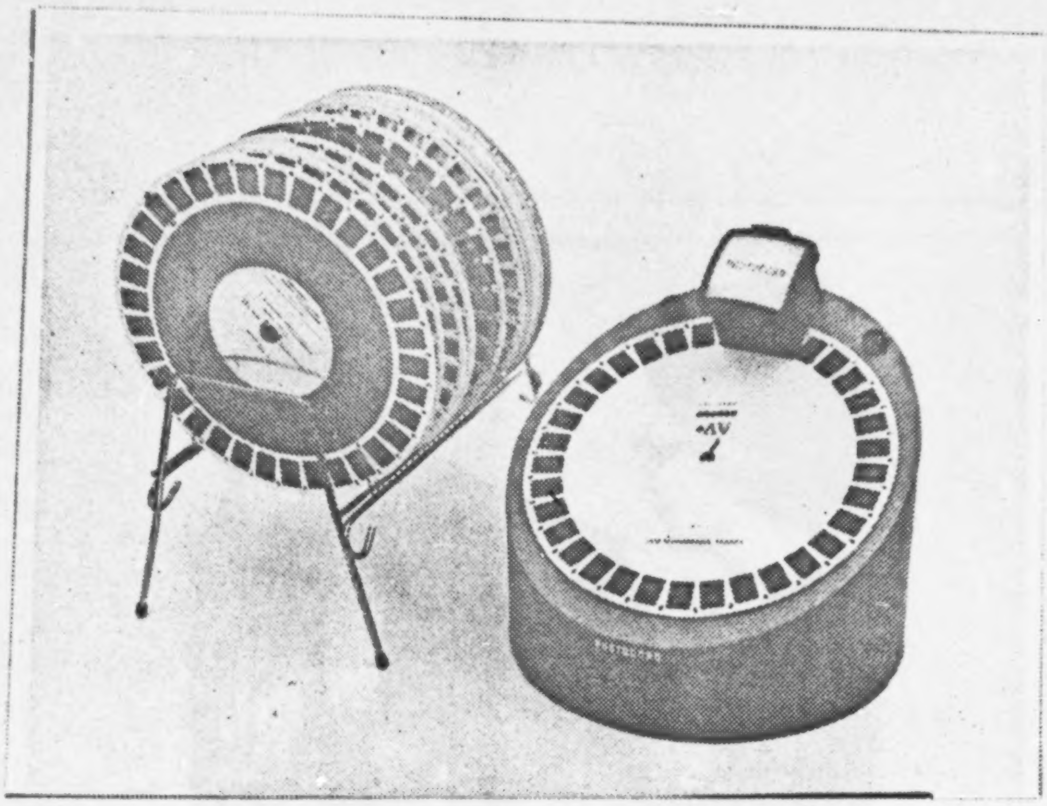


Fig 41a Sundial - disc recording has filmstrips mounted around periphery.

Neg. No. 1246

Ch. ____ Page ____

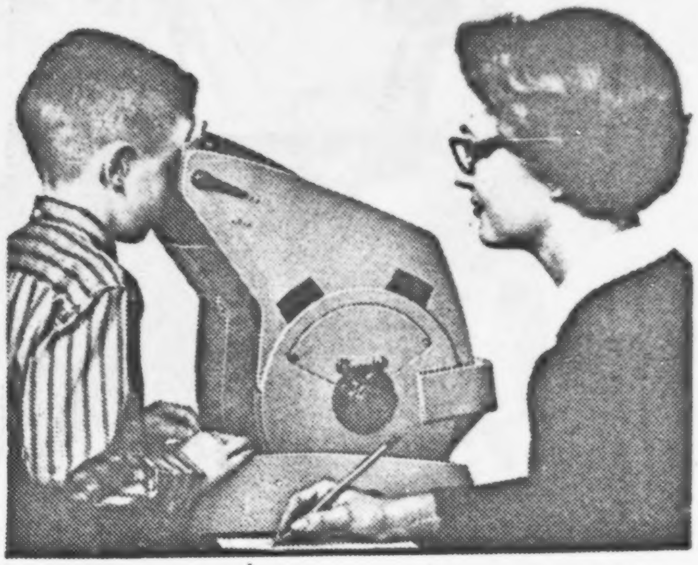
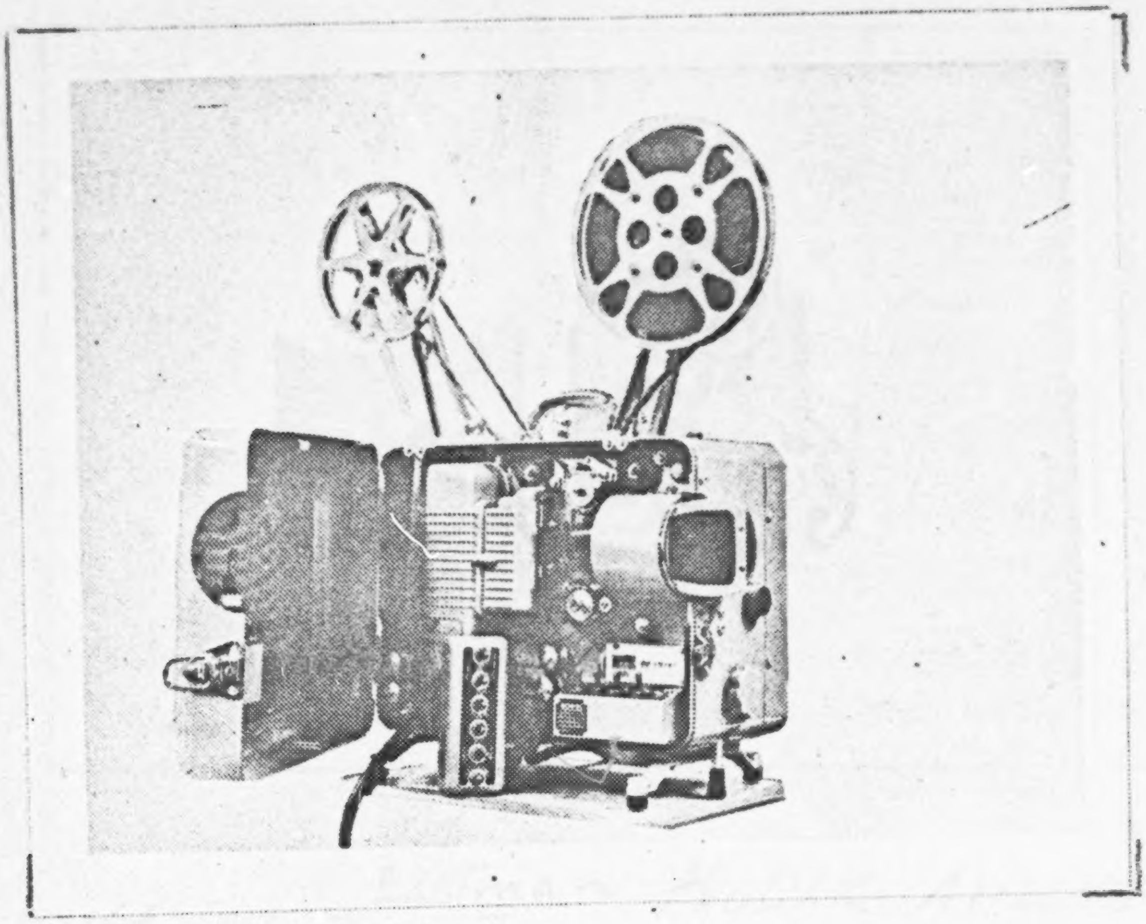


Fig 42

TITMUS OPTICAL —
vision tester used in
schools, ~~[illegible]~~

Neg. No 526

Ch._____ Page_____



~~Modified Bell & Howell~~
Camera Equipment Co

Fig 43a

— modified Bell & Howell facilitates data analysis.

Neg. No. 1012

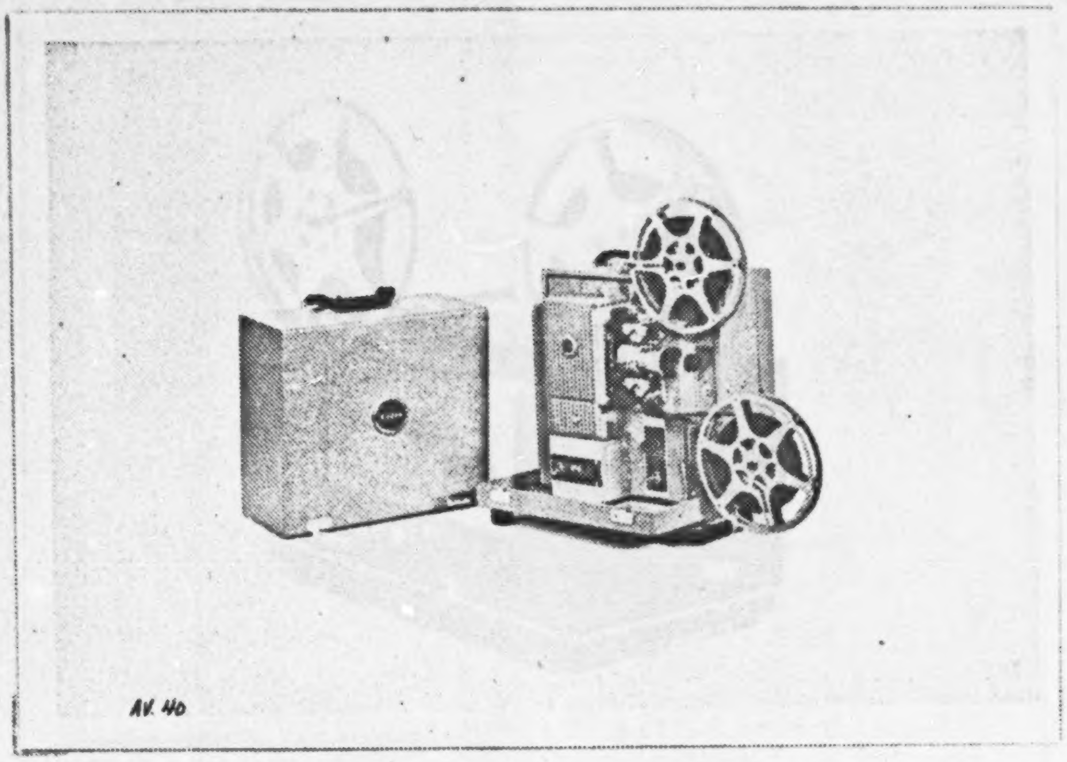


Fig 44 Eastman KODAK ANALYST ~~16mm~~ variable speed 16mm projector.

Neg. No 242

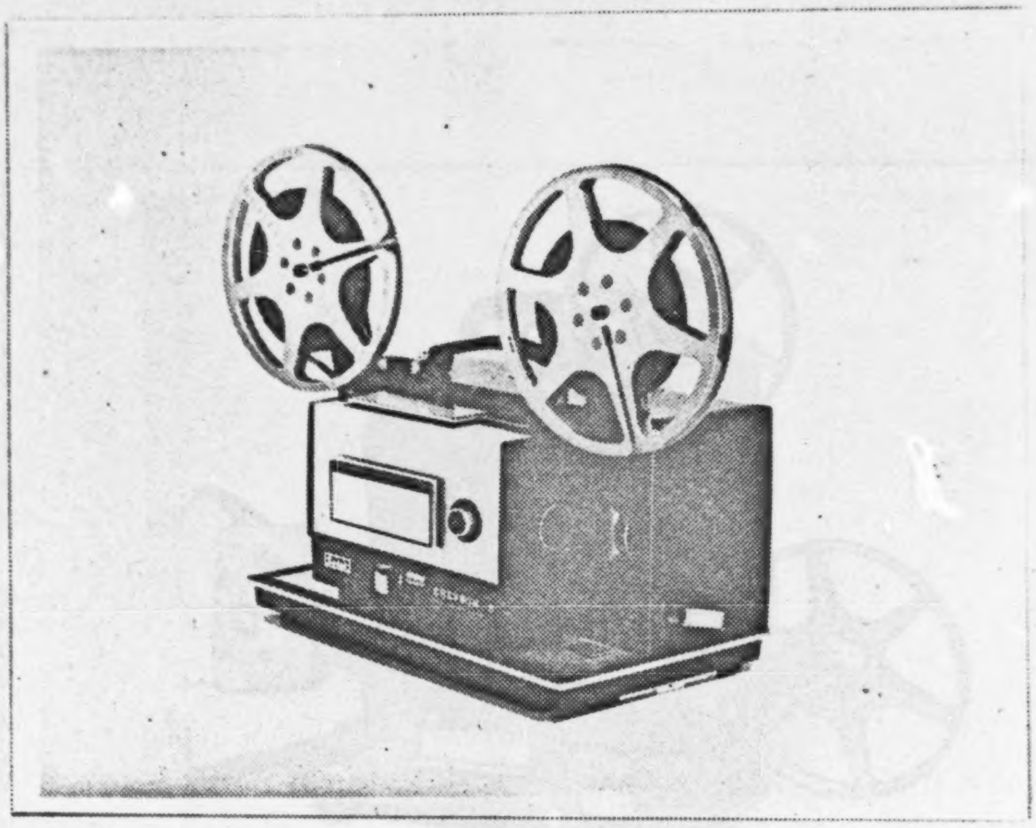


Fig 45 Eastman Kodak Chevron 8 — home projector also useful to sports coaches

Neg. No __________

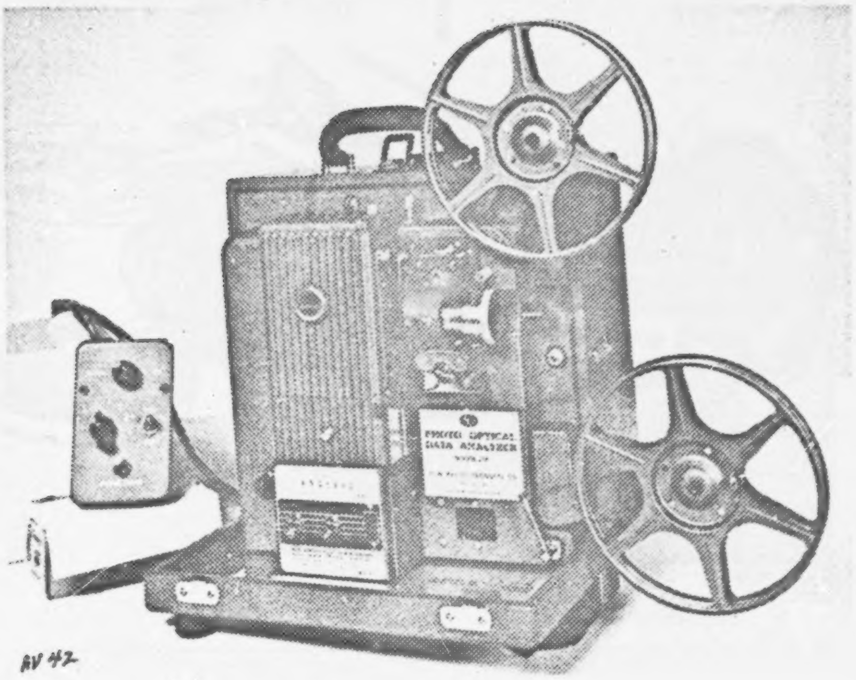


Fig 26

LW photo, Inc.

MODIFIED KODAK ANALYST for flickerless low speed and single frame projection using remote control

Neg. No. 263

Top

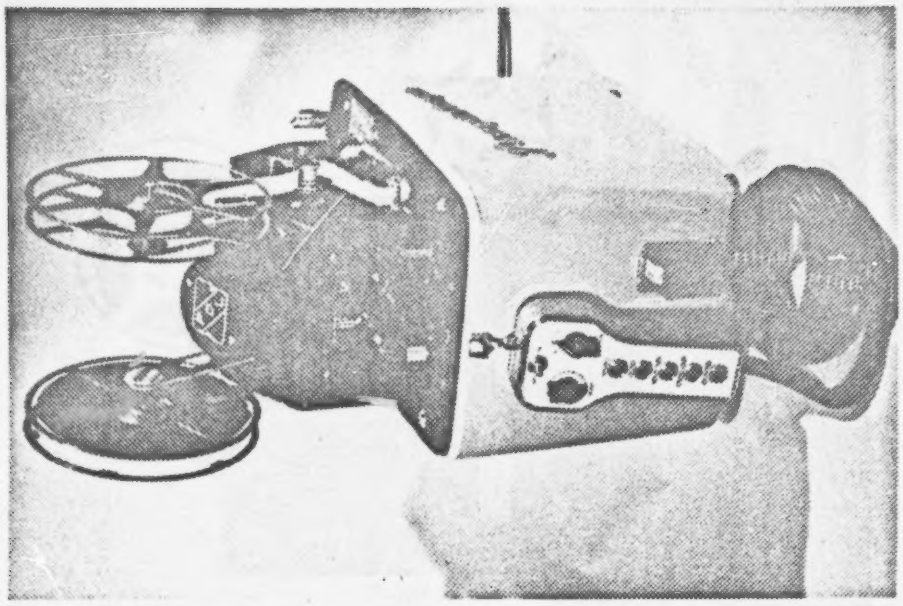
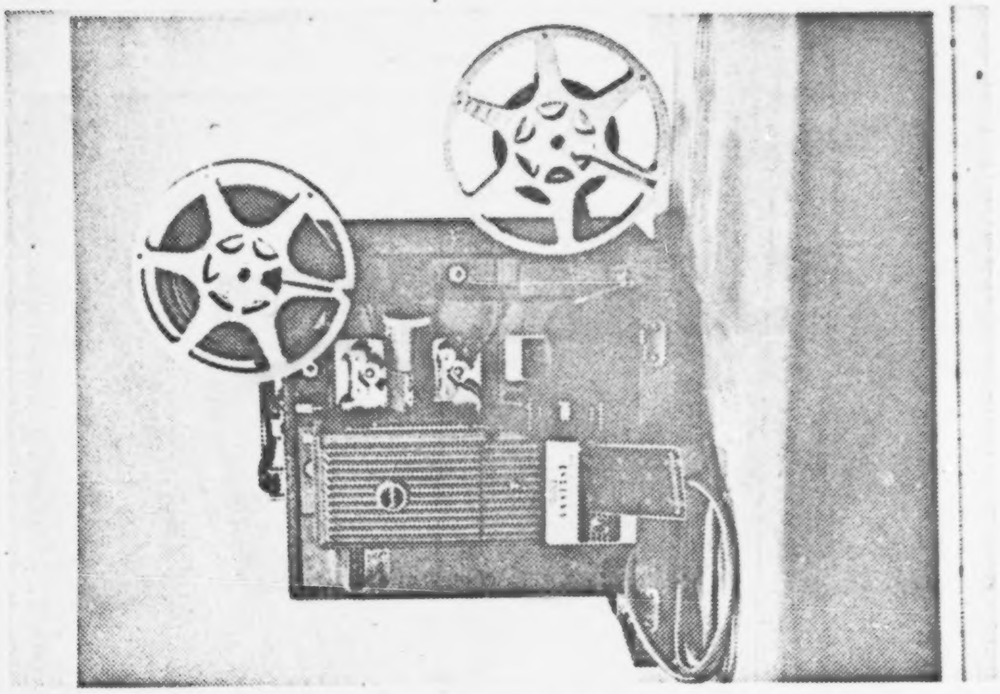


Fig 47

PERCEPTOSCOPE — analysis projector with low speeds, still frame, automatic stop cueing on film, adaptable for reading pacer and teaching machine.

Neg. No 453



WEINBERG WATSON —

Fig 48

"modified Kodak Analyst" for low speed and single frame projection

NOR No. 240

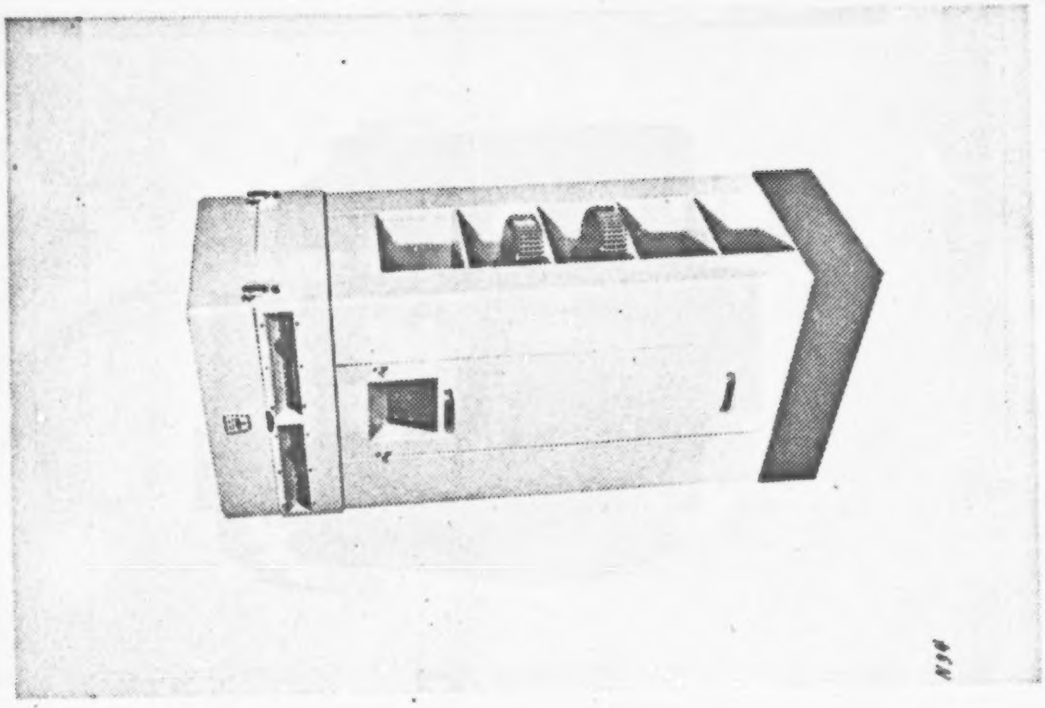


Fig 49

BLONDER TONGUE — random access slide mechanism developed especially for television studios

Neg. No 394

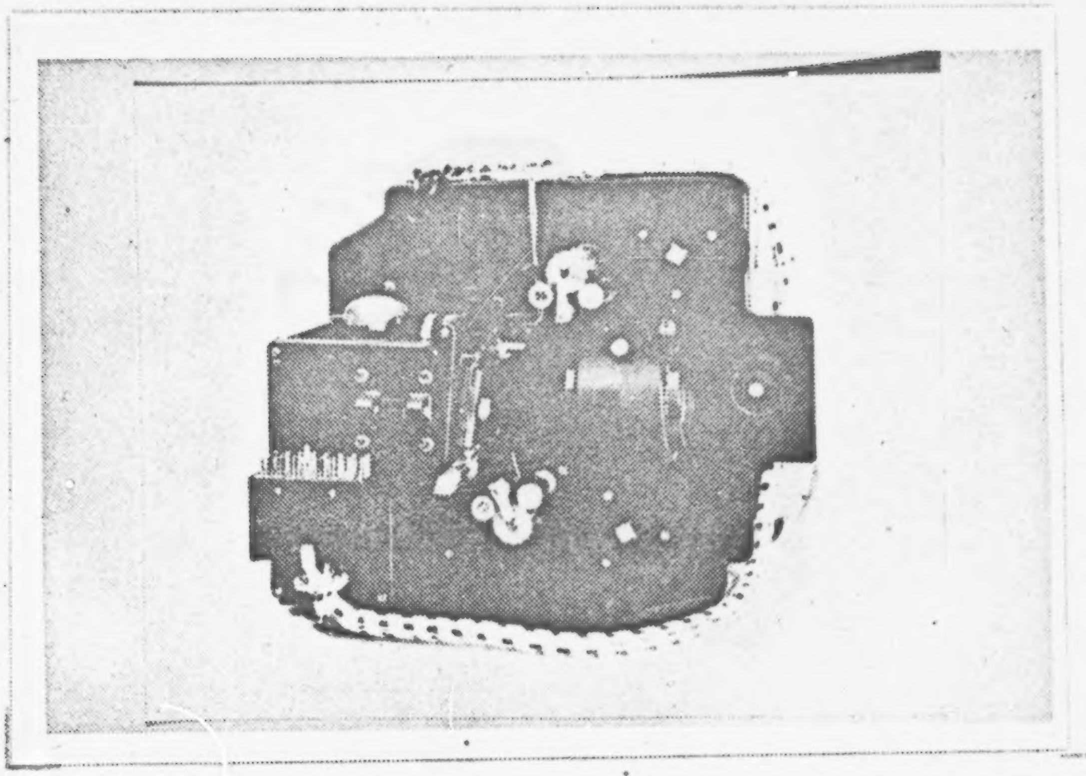


Fig. 50

MAST – random access projector for up to 100 ft 35mm film

Neg. No. 520

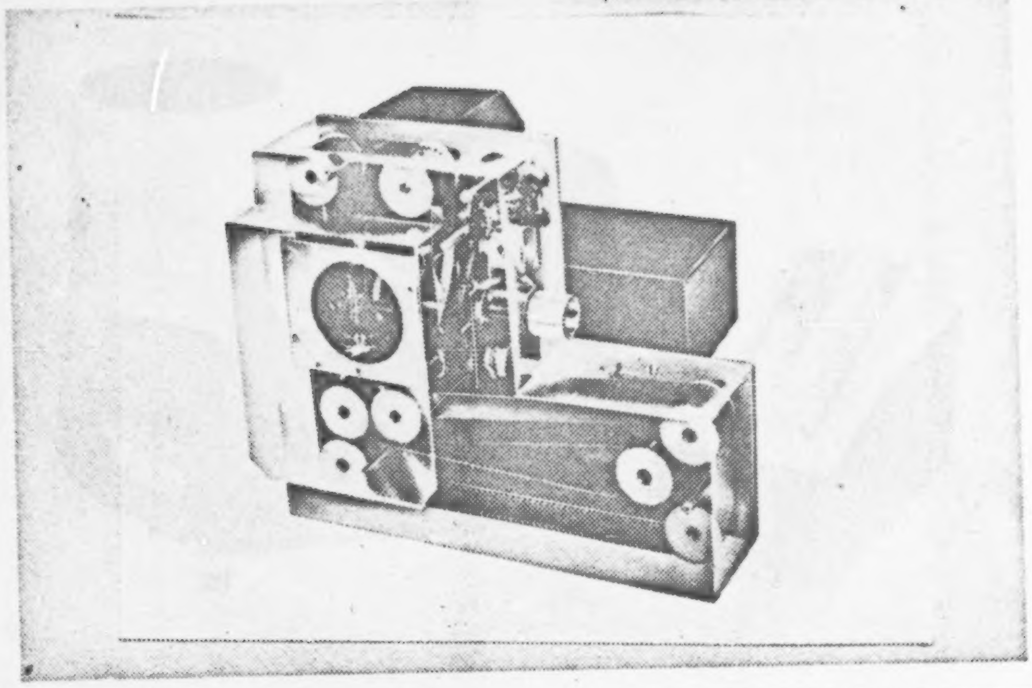


Fig 50a

MAST — 35 mm film loop holds 100 frames; access time ½ to 4 seconds

Neg. No. 522

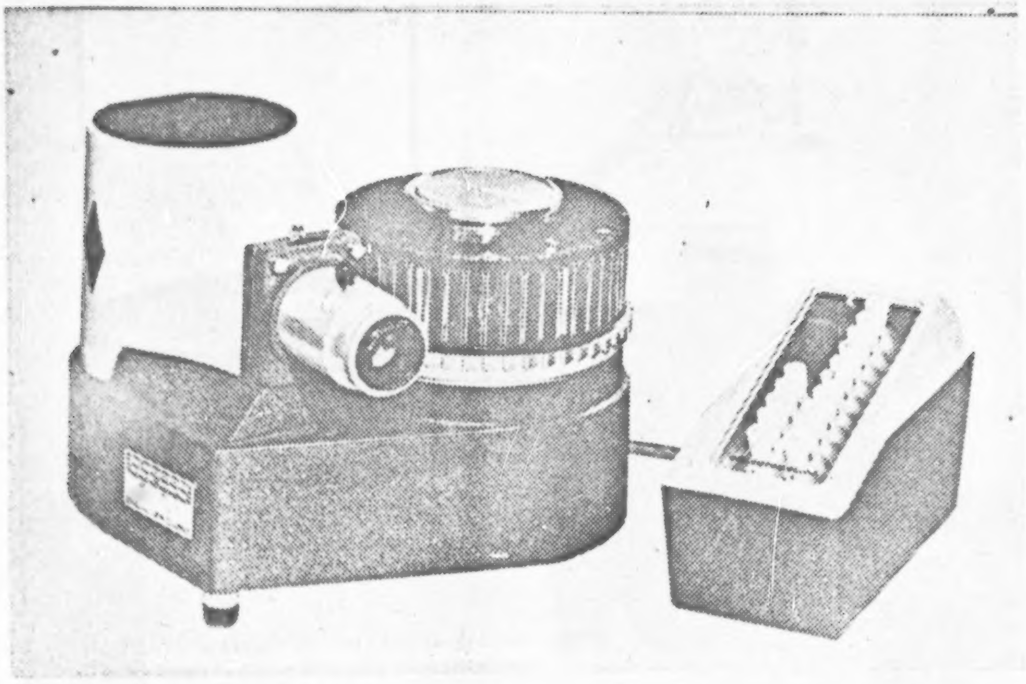


Fig. 51

SPINDLER & SAUPPE — random access to 2x2 slides

Neg. No. 263

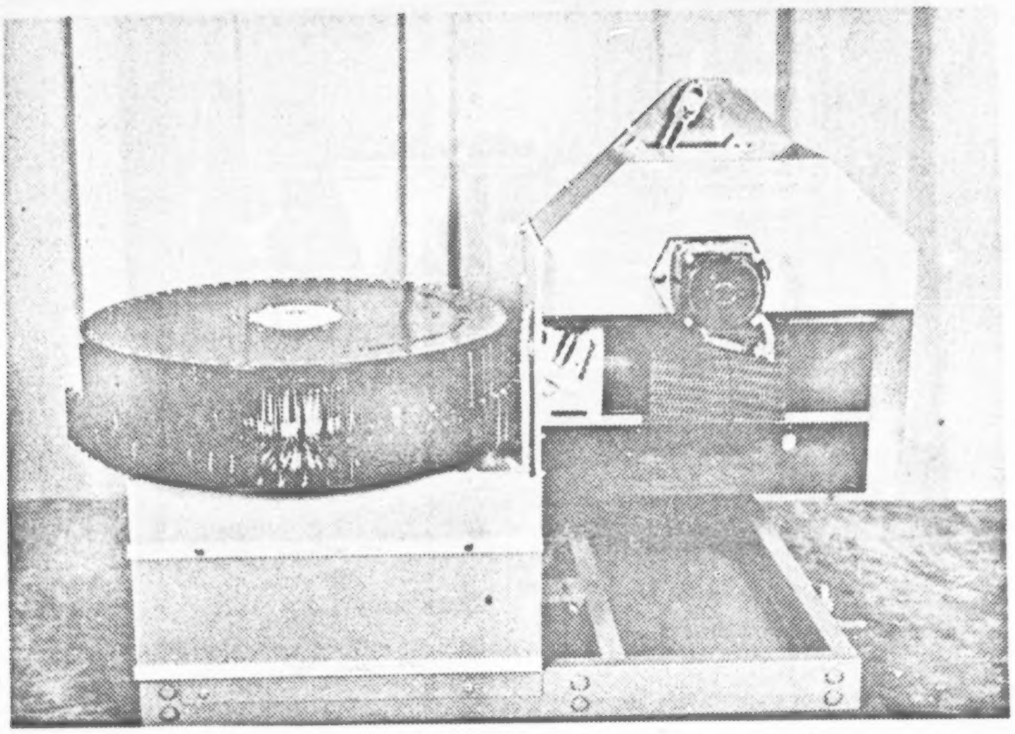


Fig 52

TELEPROMPTER — up to 60 lantern slides can be selected at random; unit for 2x2 slides also available.

Neg. No. 1013

Ch. ______ Page ______

Top

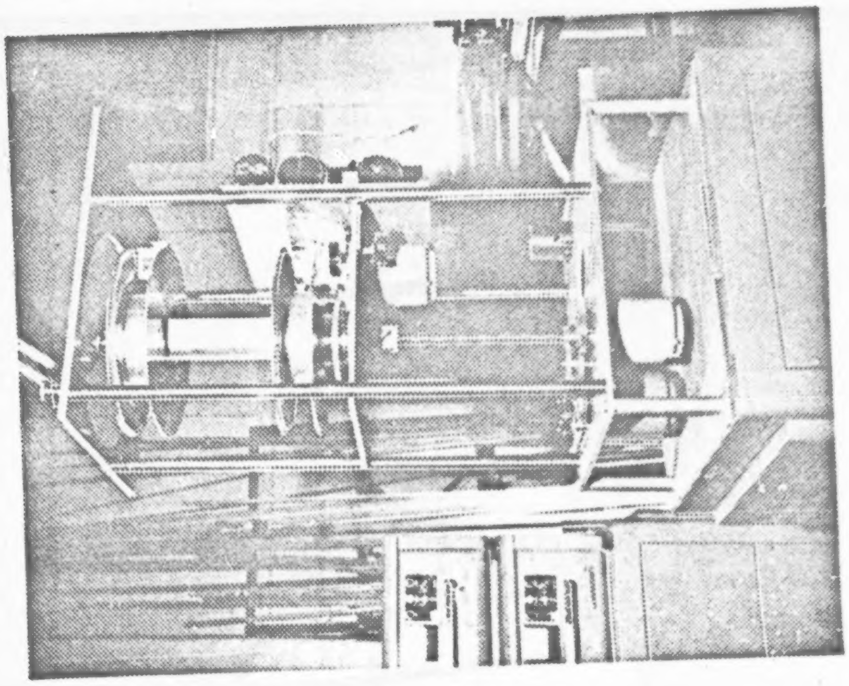


Fig 52a

TELEPROMPTER 600 — multiple slide carriers allow storage to be extended.

Neg. No. 396

Ch.______ Page ______

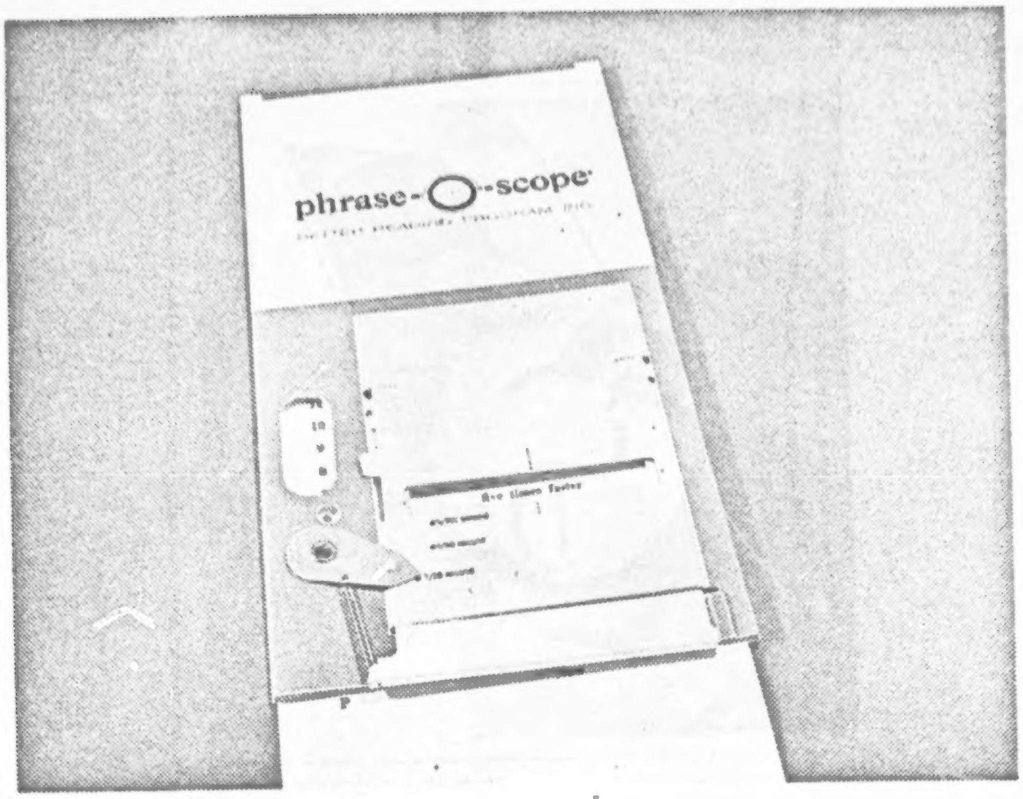


Fig 53

Better Reading Program — inexpensive tachistoscope accompanies materials

Neg. No. 1014

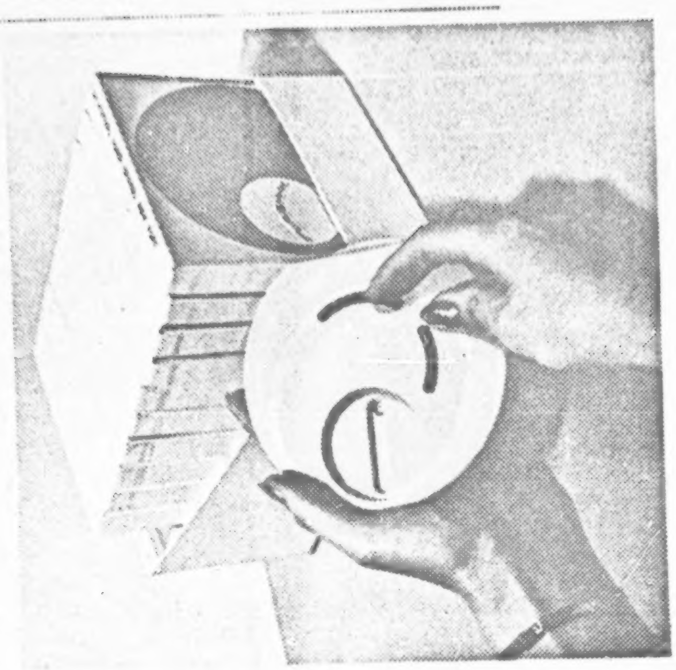


Fig 54 Educational Development Labs - tachistoscope for direct viewing

Neg. No 292

Ch._____ Page_____

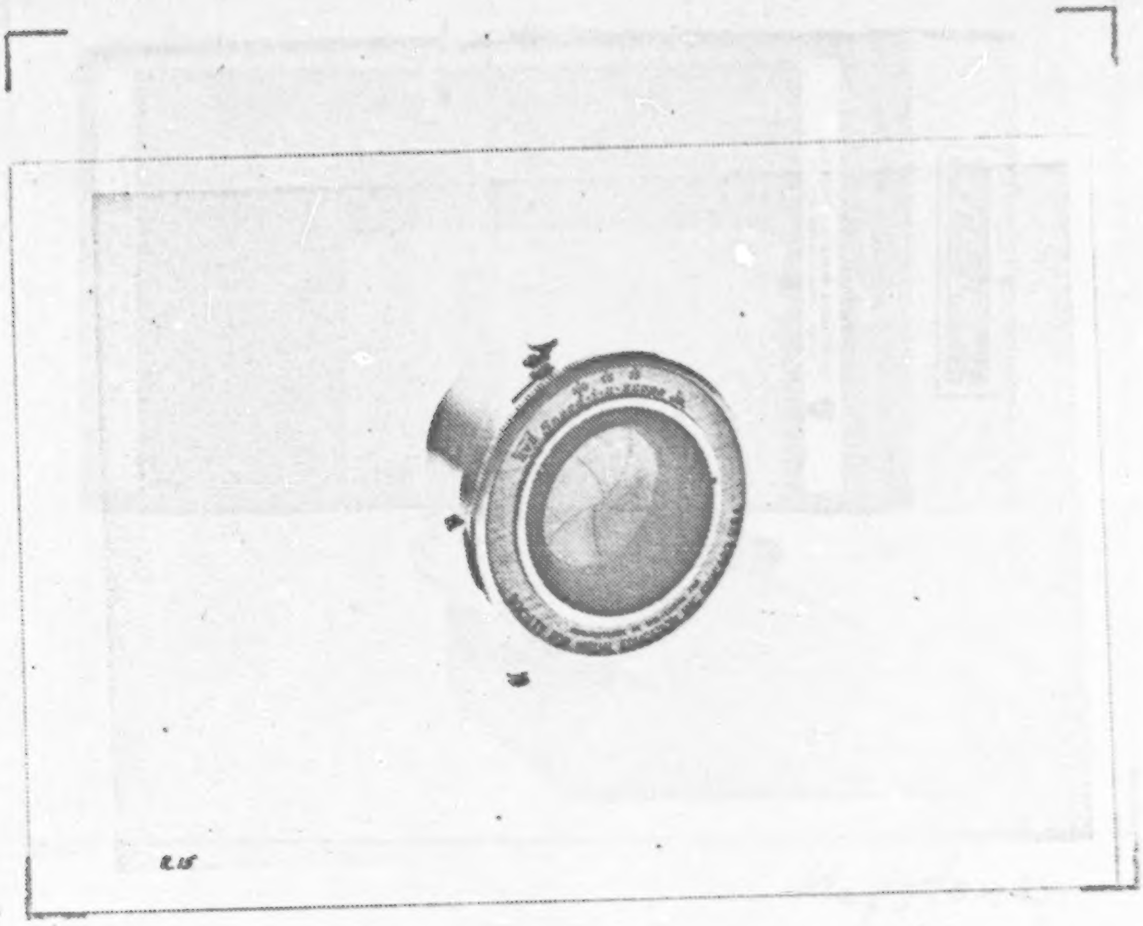


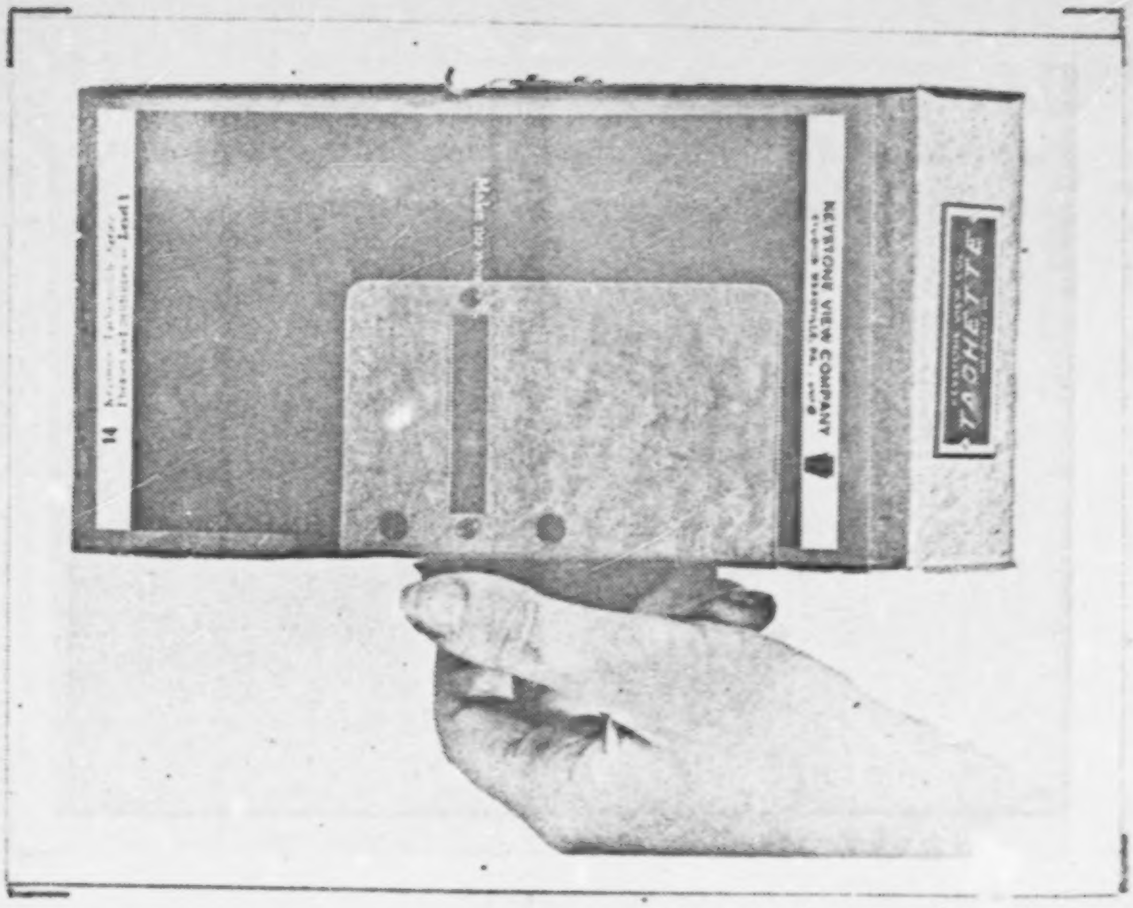
Fig 55

GRAFLEX — tachistoscope attachment for slide projector

Neg. No. 294

Ch._____ Page_____

TOP



Keystone - direct viewing tachistoscope

Fig 56

Neg. No. 1015

2

Ch. ____ Page ____

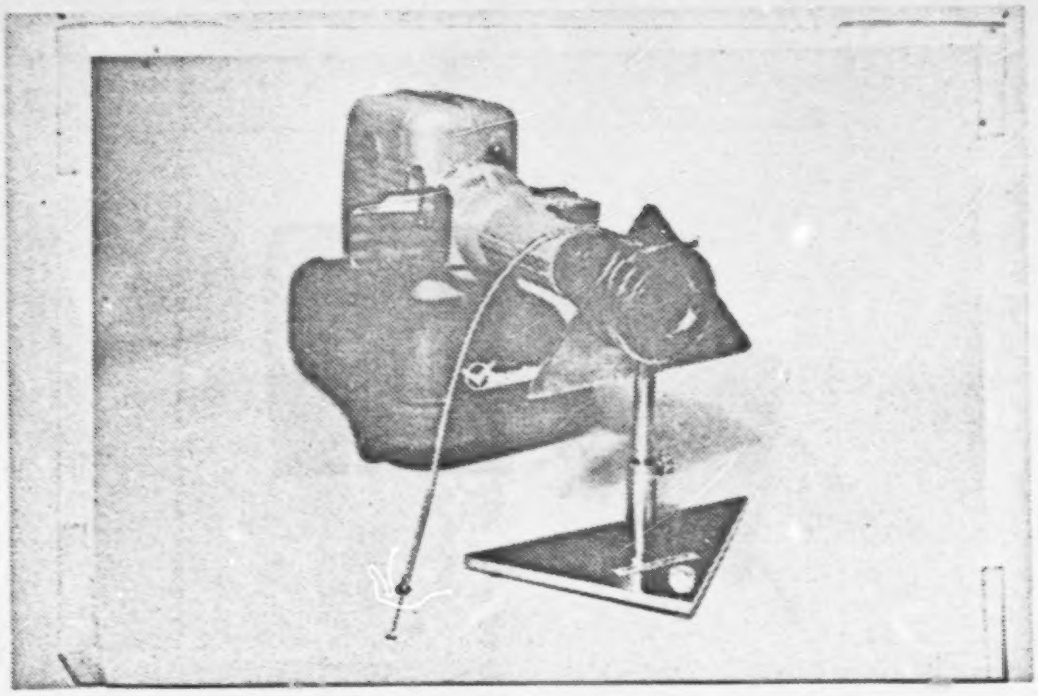


Fig 57

Lafayette Instrument Co. — tachistoscope and projector mounting.

Neg. No. 465

Ch. ____ Page ____

Top

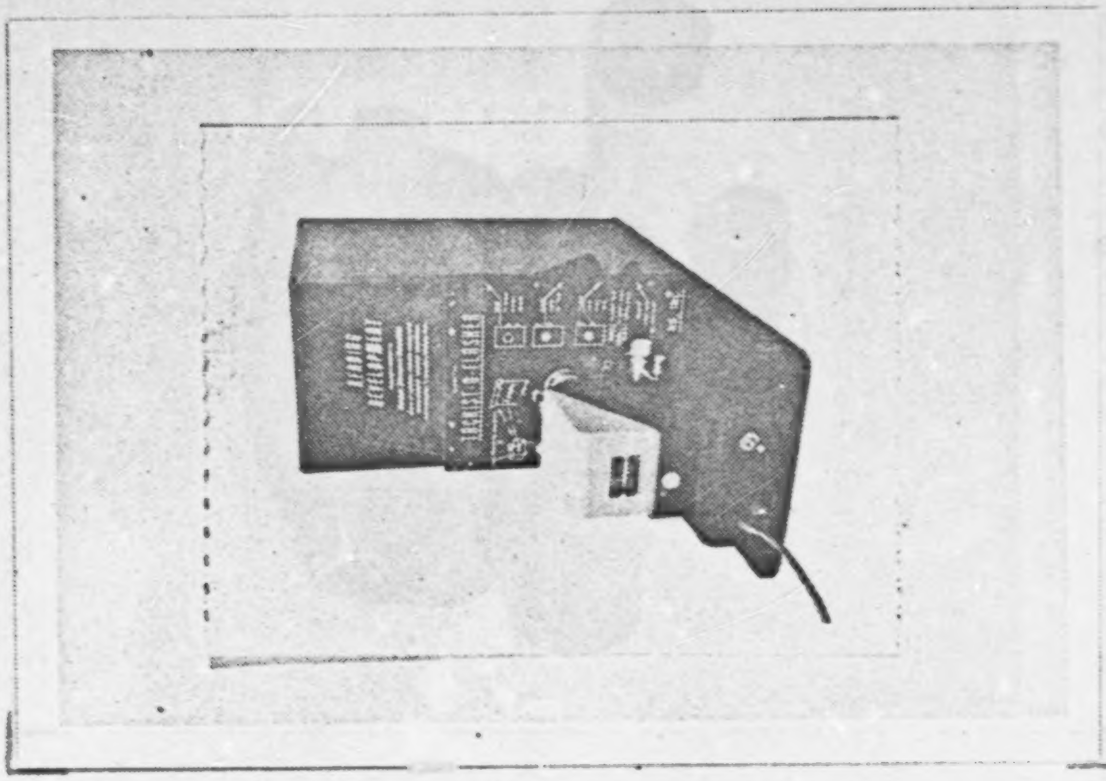
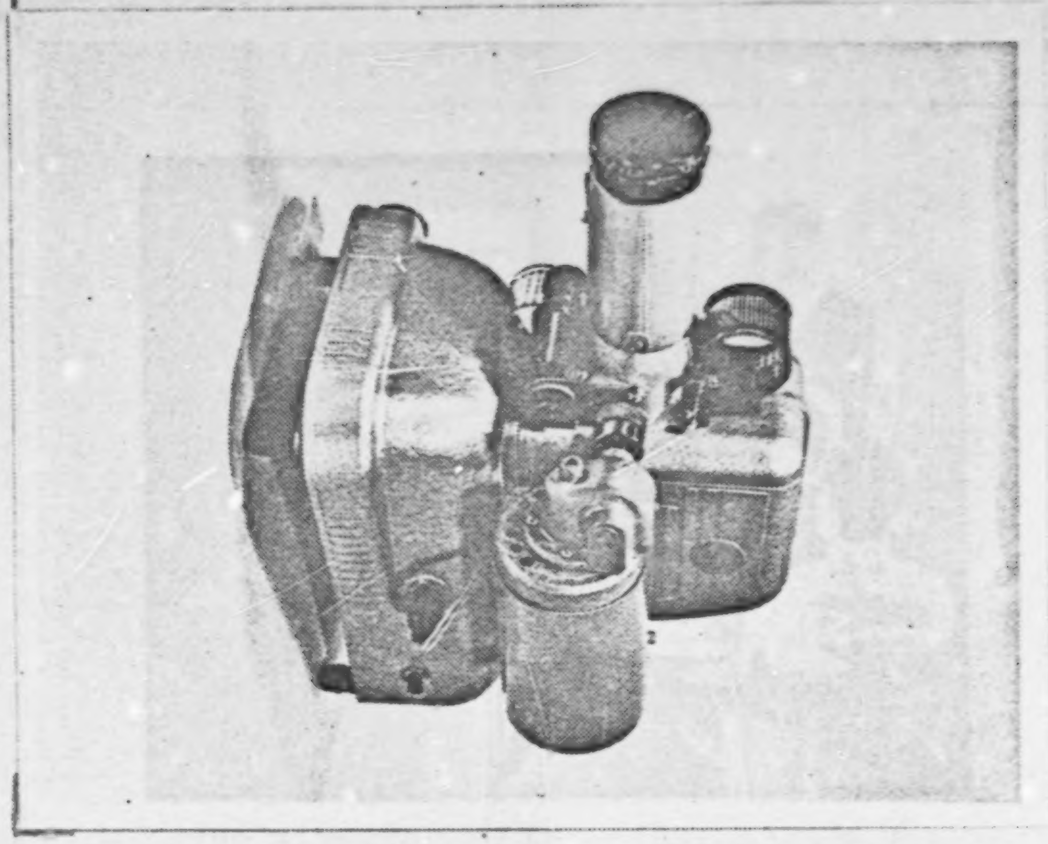


Fig 58 LEARNING THROUGH SEEING INC. — tachistoscope with integral rear projection screen for individual use

Neg. No. 542

Ch. _____ Page _____



Top

Fig 59

EDUCATIONAL DEVELOPMENT LABS. — reading pacer scans filmstrips

Neg. No. # 1016

Ch. ______ Page ______

Fig 60

PERCEPTOSCOPE — uses 16mm motion picture film scanned one frame at a time — instructor has remote control

Neg. No. 393

Ch. ____ Page ____

BOOK OF THE MOUTH CLUB — mechanical pacer

Fig 61

Neg. No. # 1017

Ch. ____ Page ____

TOP

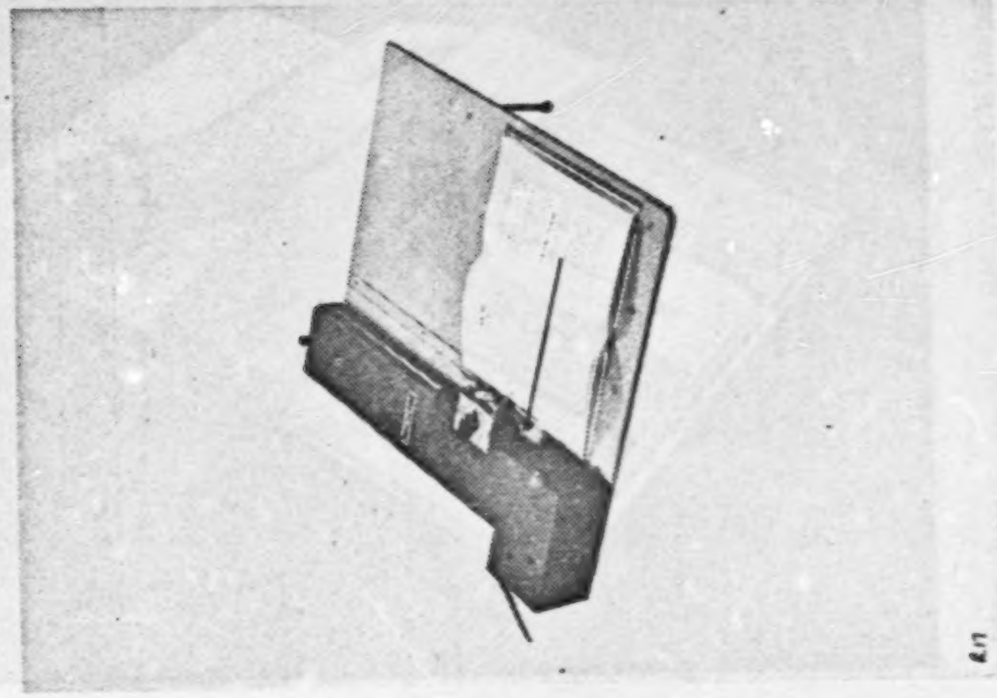


Fig 62

KEYSTONE — mechanical pacer

Neg. No. 295

Ch. ____ Page ____

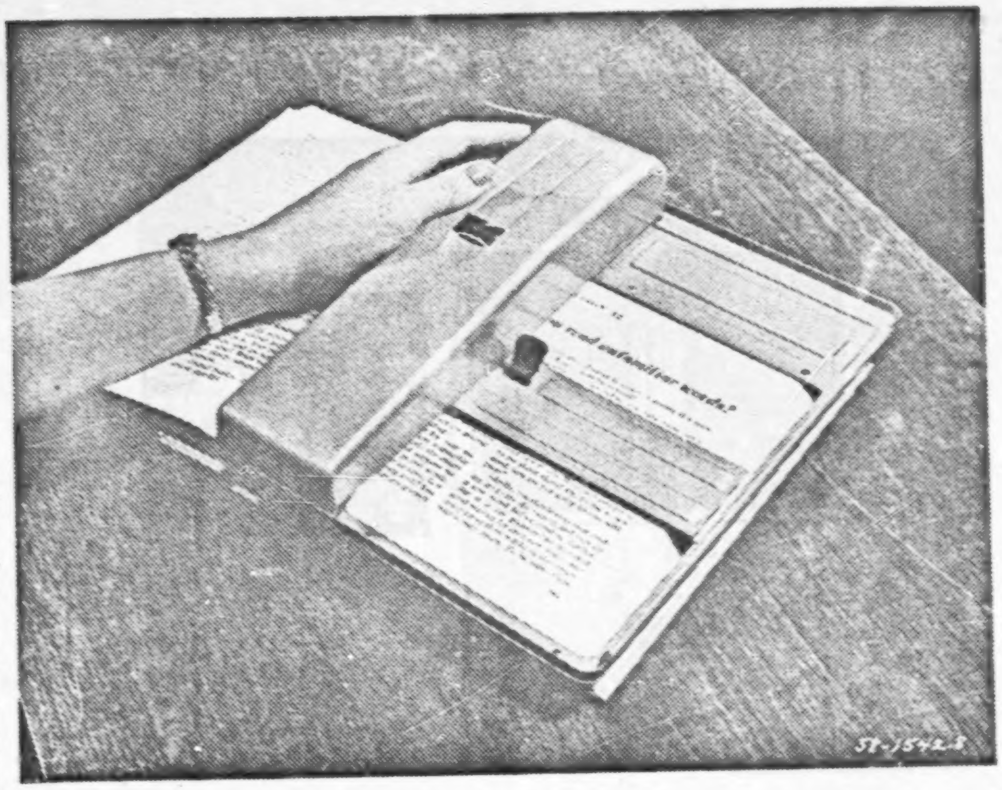
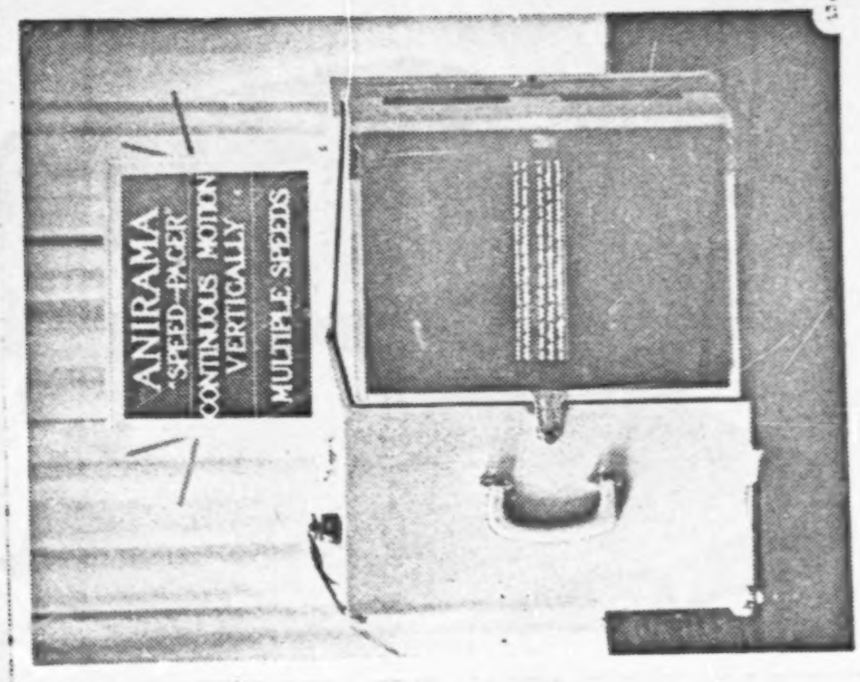


Fig. 63

SCIENCE RESEARCH ASSOCIATES
— mechanical pacer

Neg. No. #1018

TOP



ANIRAMA - film strip scanner

Fig 6d

Neg. No. 372

Ch.____ Page____

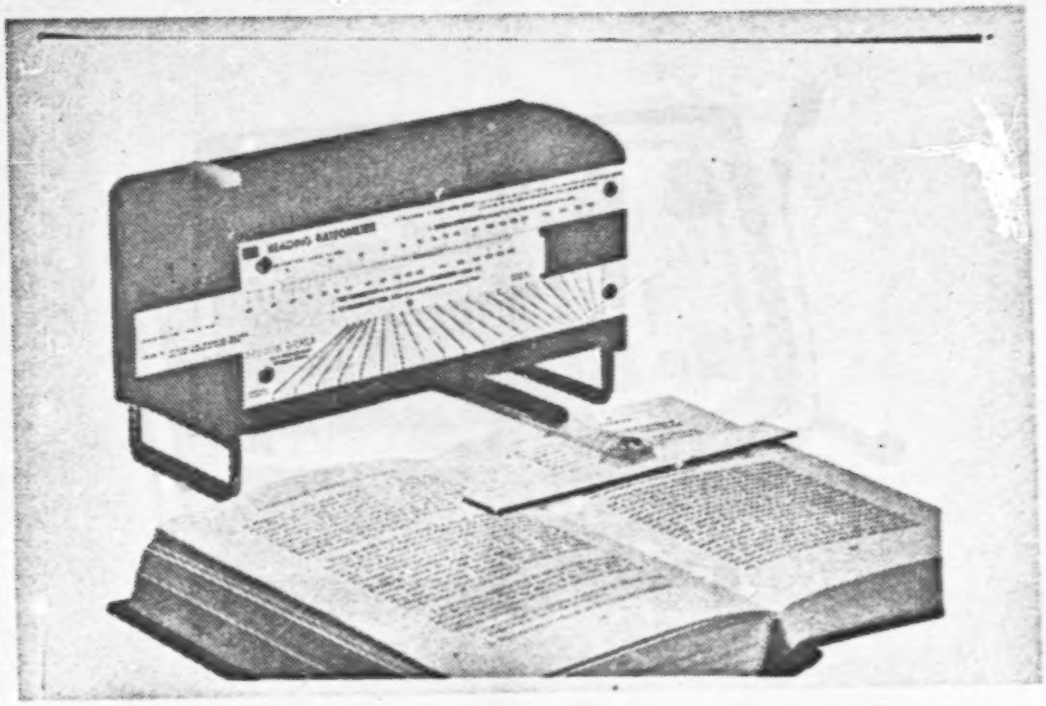


Fig 65

AV RESEARCH —
mechanical ~~scanner~~ pacer

Neg. No. 447

Ch. _____ Page _____

TOP

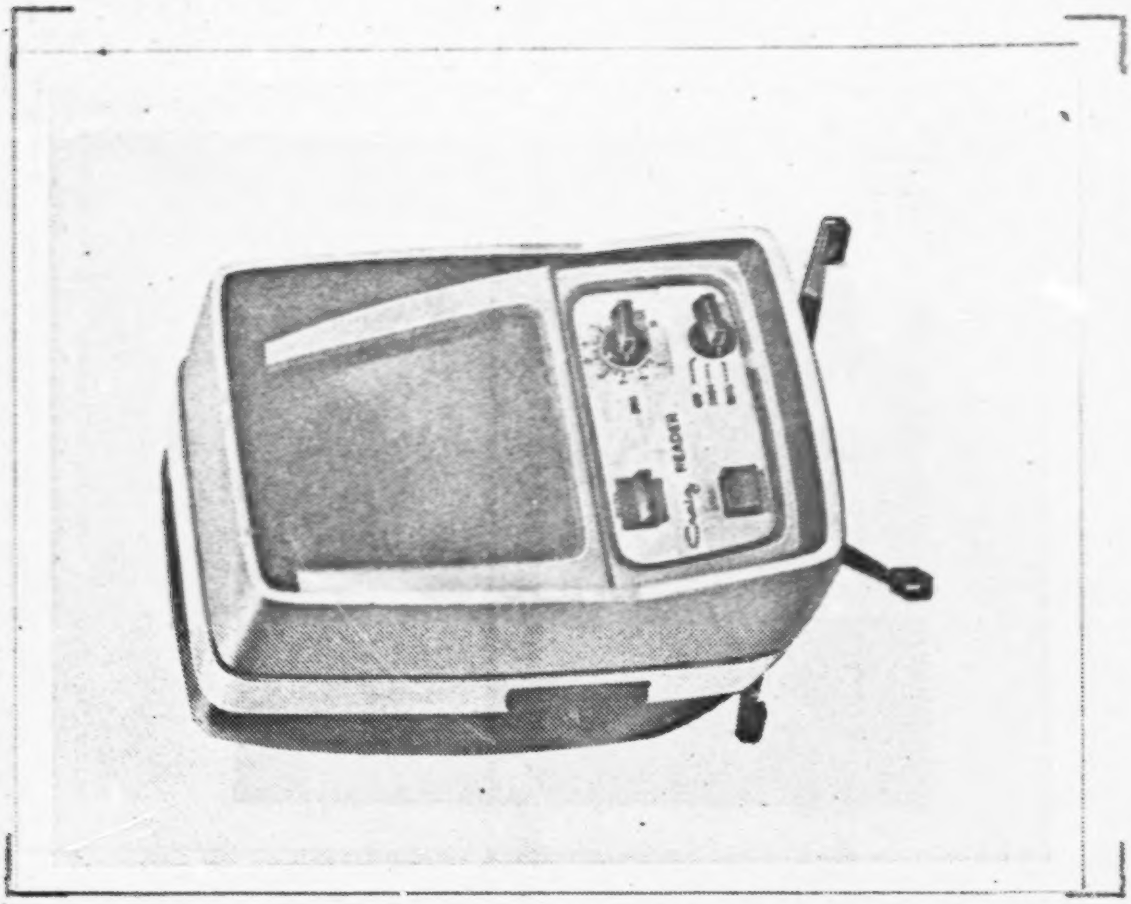


Fig 66

CRAIG RESEARCH – reading pacer with tachistoscopic mode

Neg. No. #1019

Ch. ____ Page ____

Fig 67

CRAIG RESEARCH – filmstrips mounted on plastic strip is used in conjunction with workbooks

Neg. No. 46

Ch. _____ Page _____

Fig 68

EDUCATIONAL DEVELOPMENT LABS — optical scanner uses spot of light

Neg. No. #1020

Ch. ____ Page ____

Fig 69

Lafayette Instrument Co. — projection scanner

Neg. No. 298

Ch. _____ Page _____

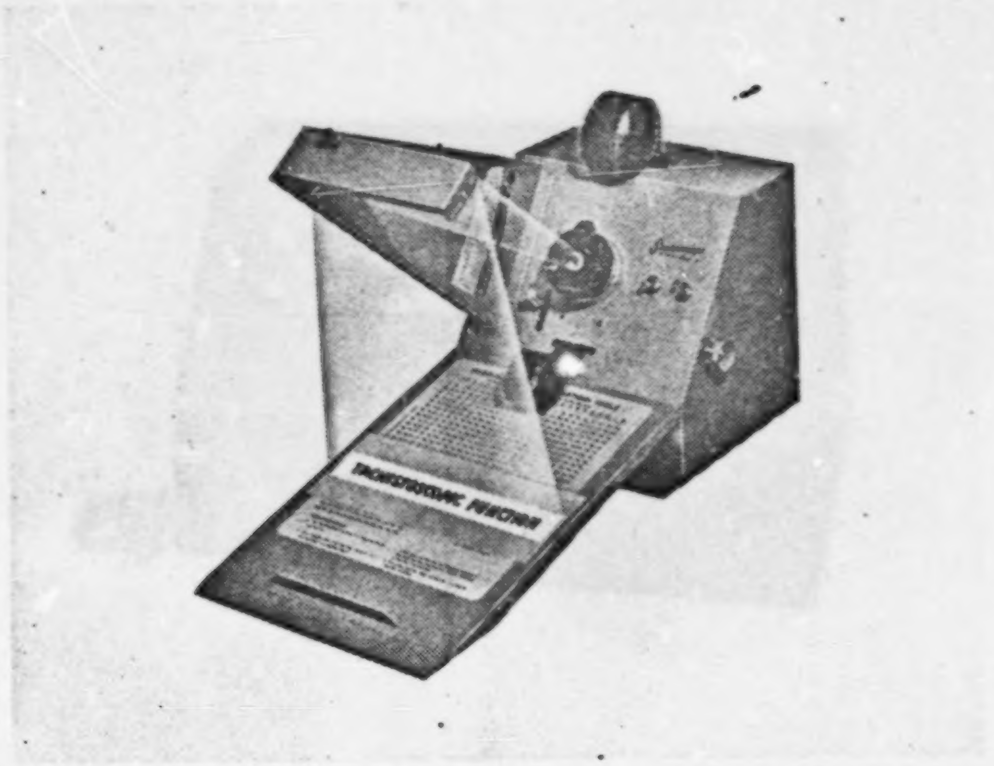


Fig 70

PSYCHOTECANICS — projection scanner with tachistoscope function

Neg. No. #1021

Ch. _____ Page _____

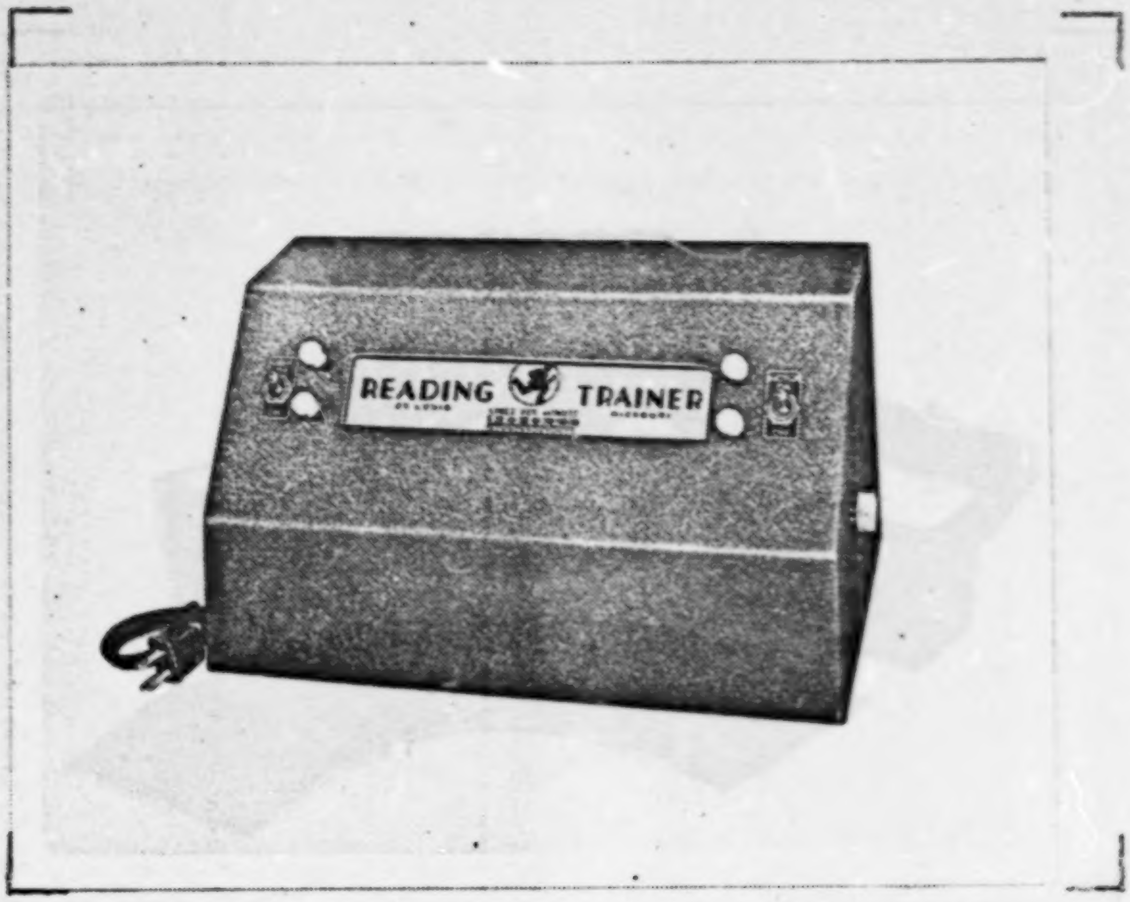


Fig 71

READING TRAINER – pacer uses program on paper rolls.

Neg. No. #1022

Ch. ____ Page ____

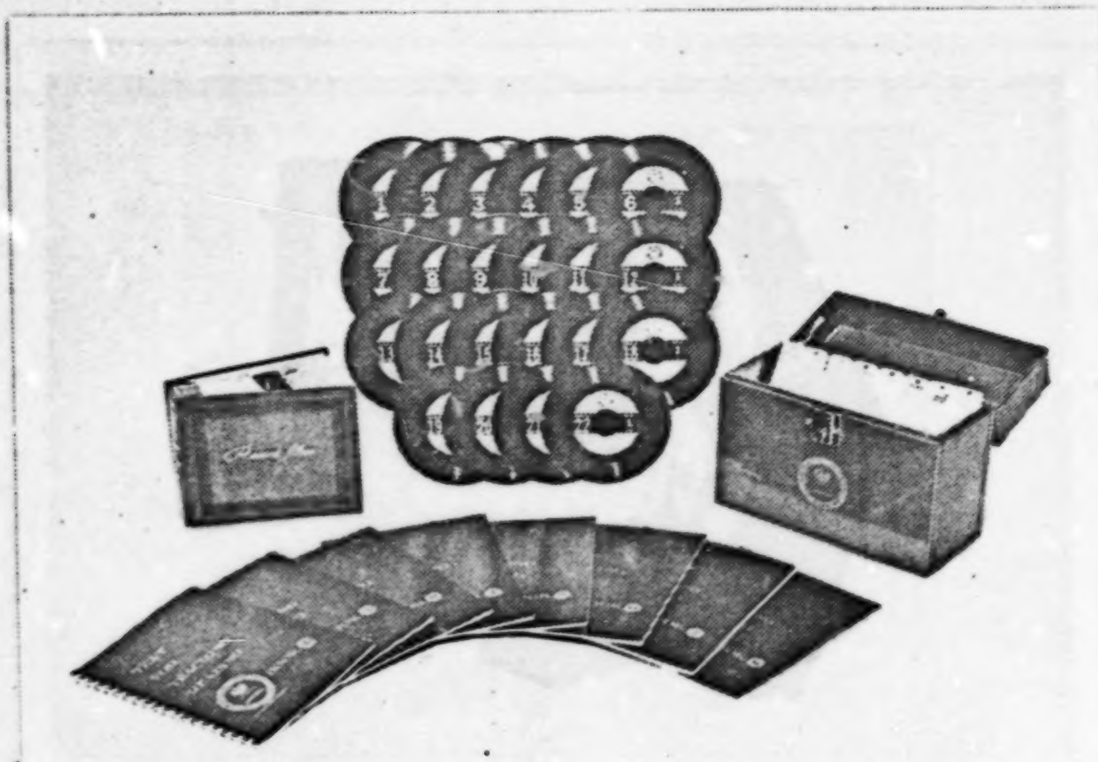


Fig 72

AMERICAN INSTITUTE OF READING — a kit of co-ordinated materials for the teaching of reading

Neg. No. ~~08~~ 1023

Ch. _____ Page _____

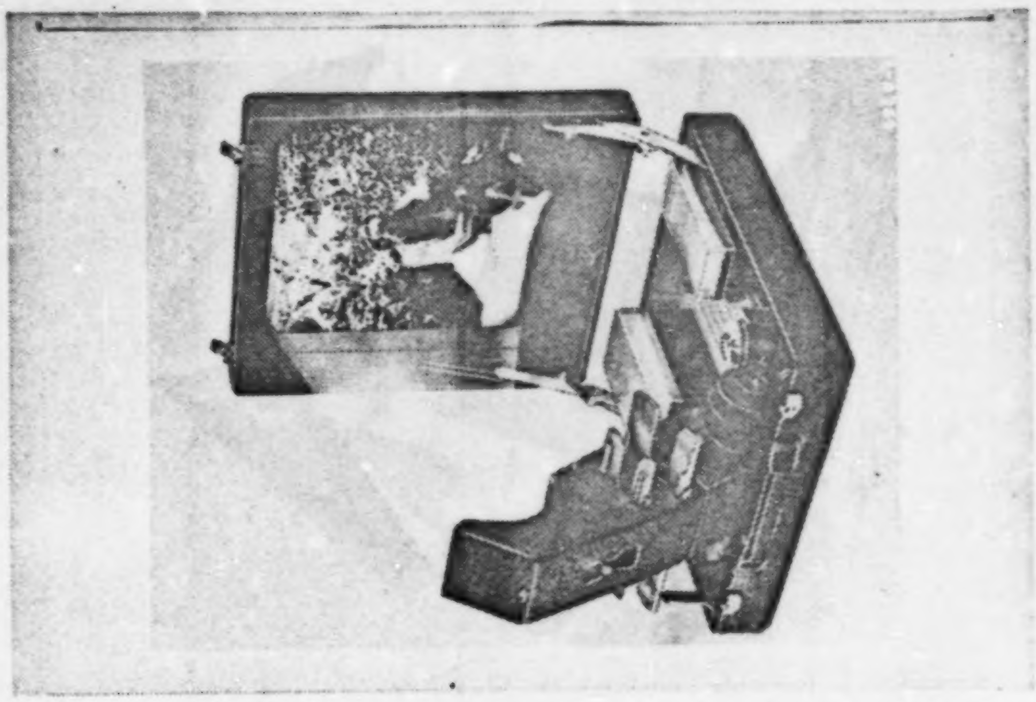


Fig 73

Buttafarri - slide and filmstrip viewer

Neg. No. 445

Ch. ____ Page ____

Fig 74

CAMERA OPTICS – filmstrip model; slide version also available

Neg. No. 373

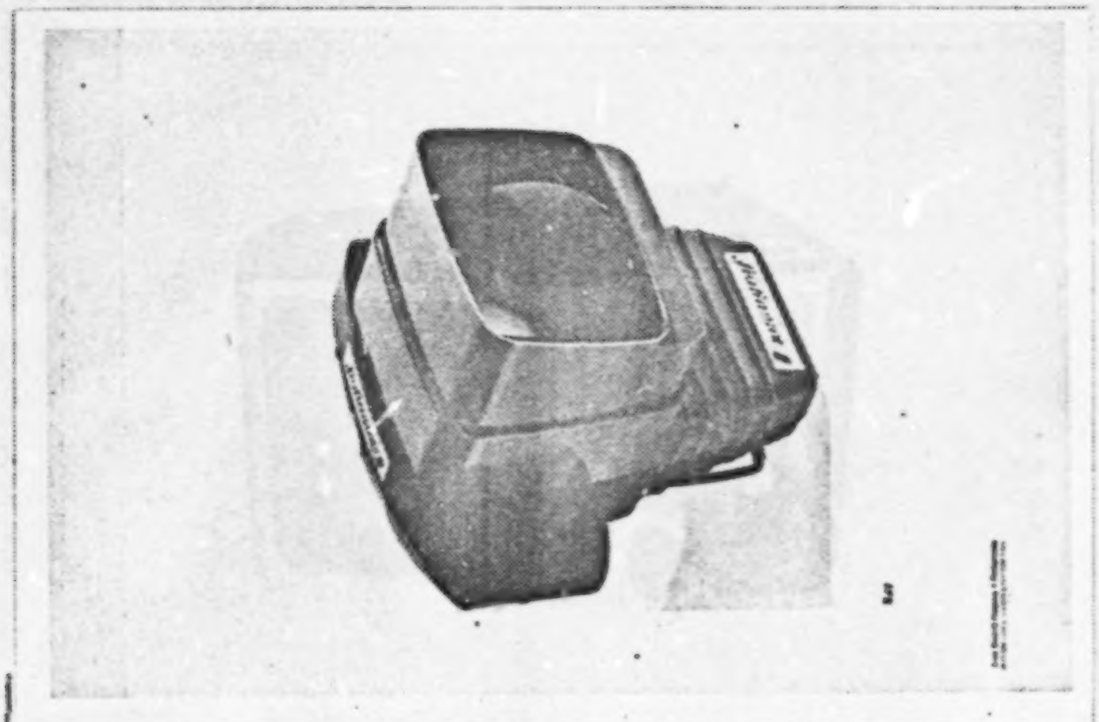
Ch. _____ Page _____

Du Kane - filmstrip viewer

Fig *75*

Neg. No. *1024*

Ch. ____ Page ____



TOP

Fig. 76

EXECUGRAF — hand viewer uses filmstrip in enclosed cartridge

Neg. No. 22

Ch. _____ Page _____

TOP

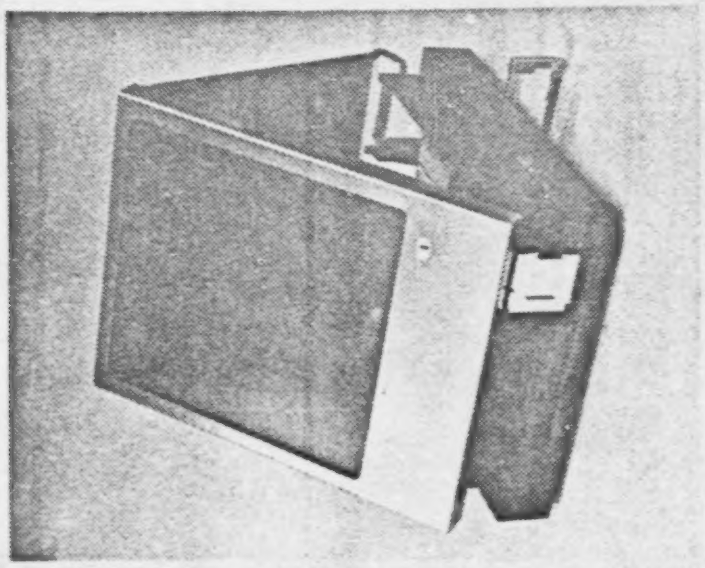
Fig 77

KARL HEITZ – Viewer for slides, filmstrips, & microfilm

Neg. No. 377

Ch. ______ Page ______

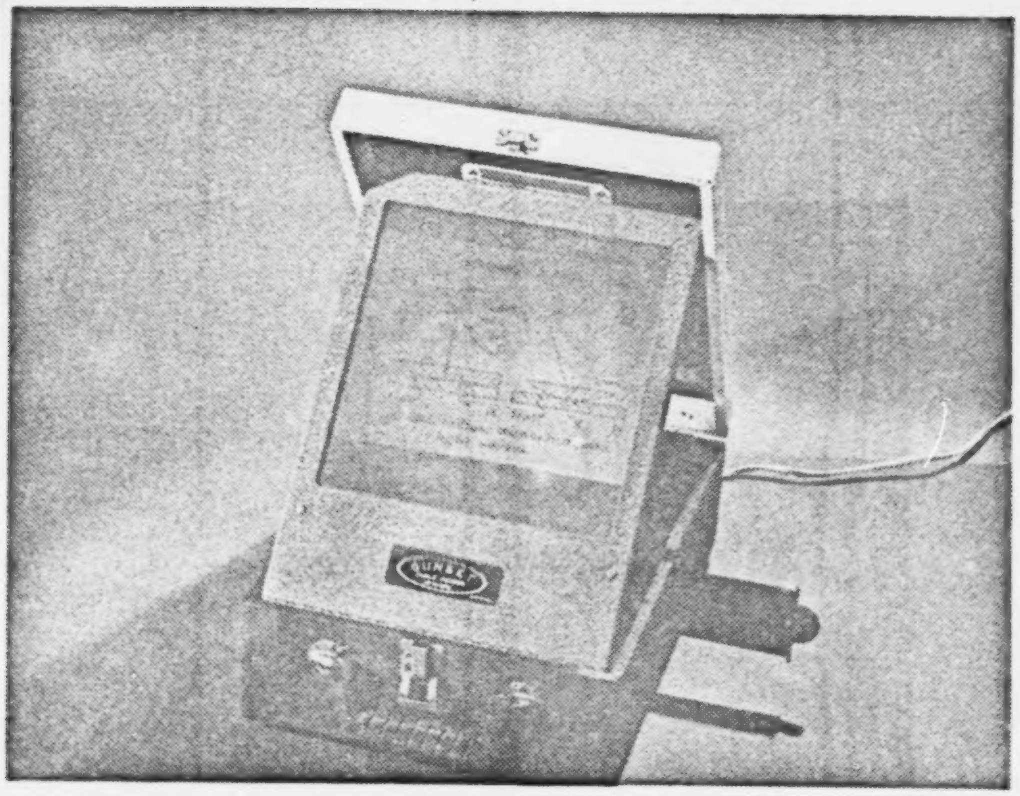
TOP



HUDSON - slide viewer

Fig 72

Neg. No. 519

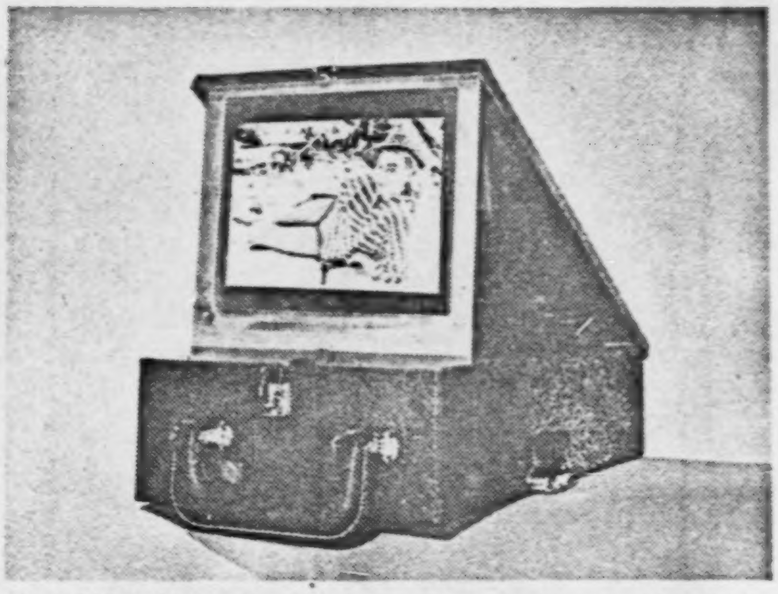


INTERCONTINENTAL — slide viewer

Fig 79

Neg. No. 1025

Ch. ____ Page ____



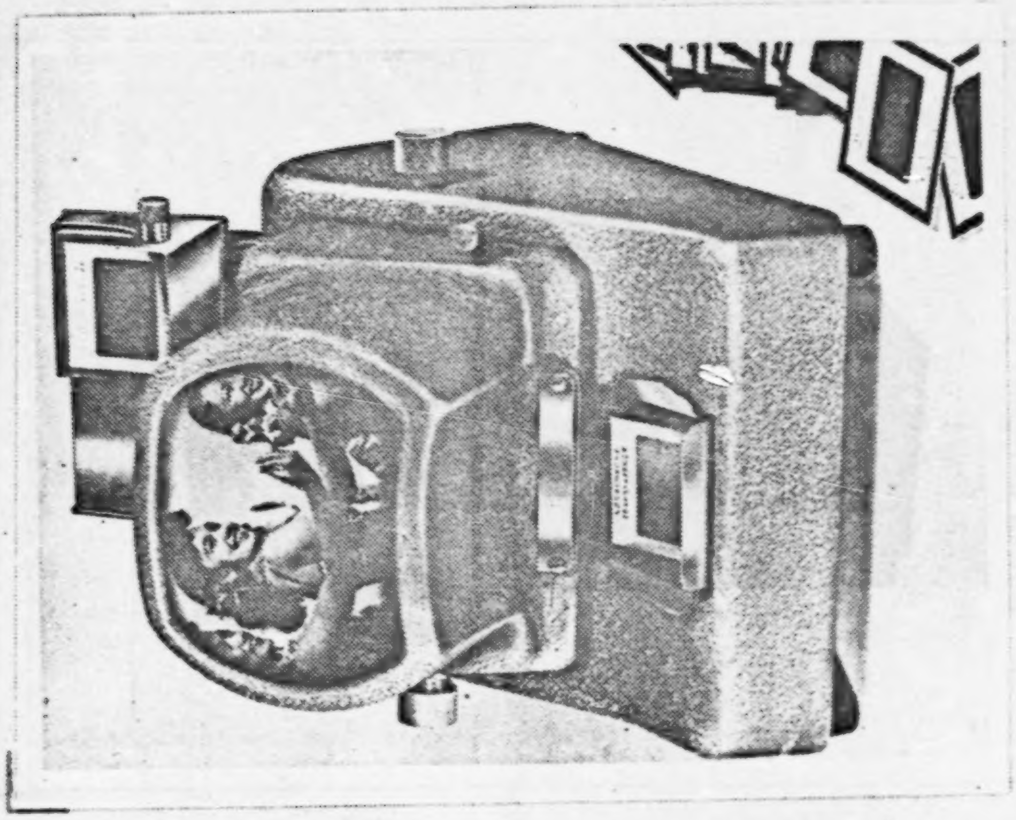
McCLURE - slide viewer

Fig 80

Neg. No. 514

Ch. _____ Page _____

TOP



STANDARD - slide viewer; filmstrip model available

Fig. 81

Neg. No. ~~LW~~ 1026

Ch. ______ Page ______

Top

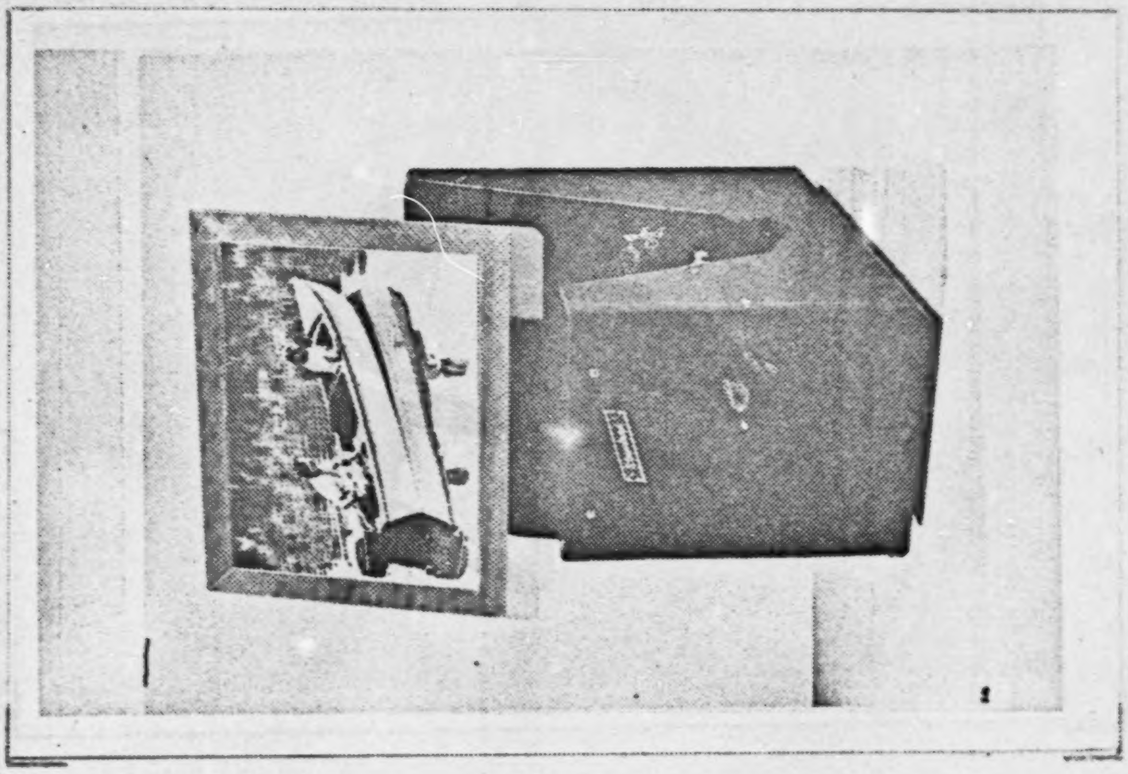


Fig 81a

STANDARD - filmstrip viewer

Neg. No. 20

Ch. _____ Page _____

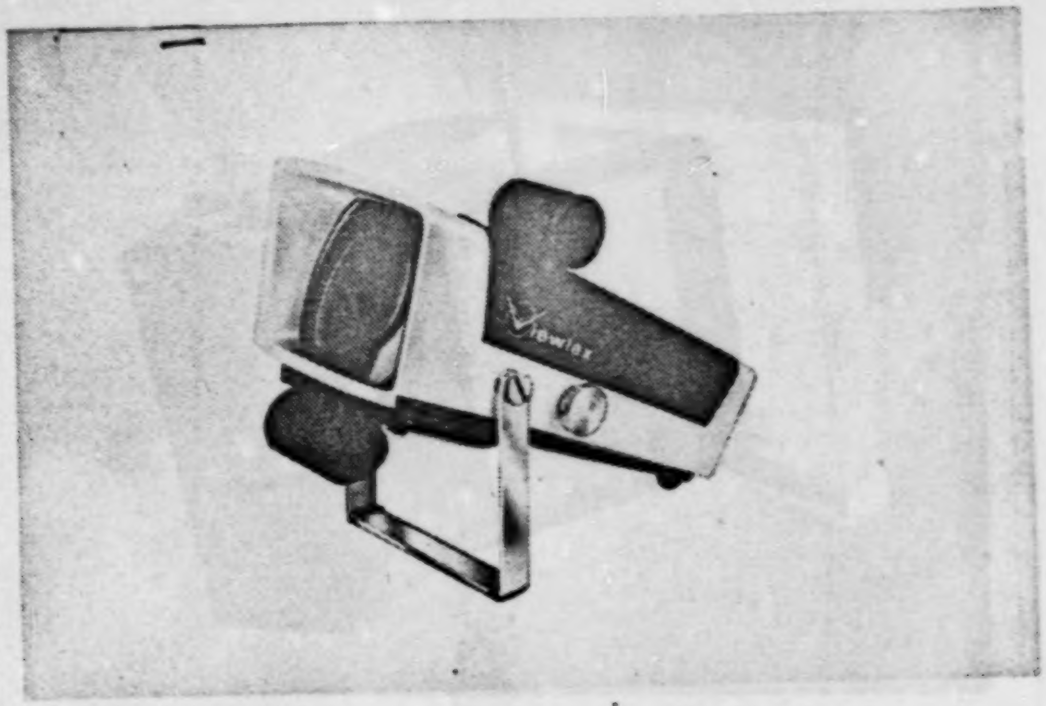
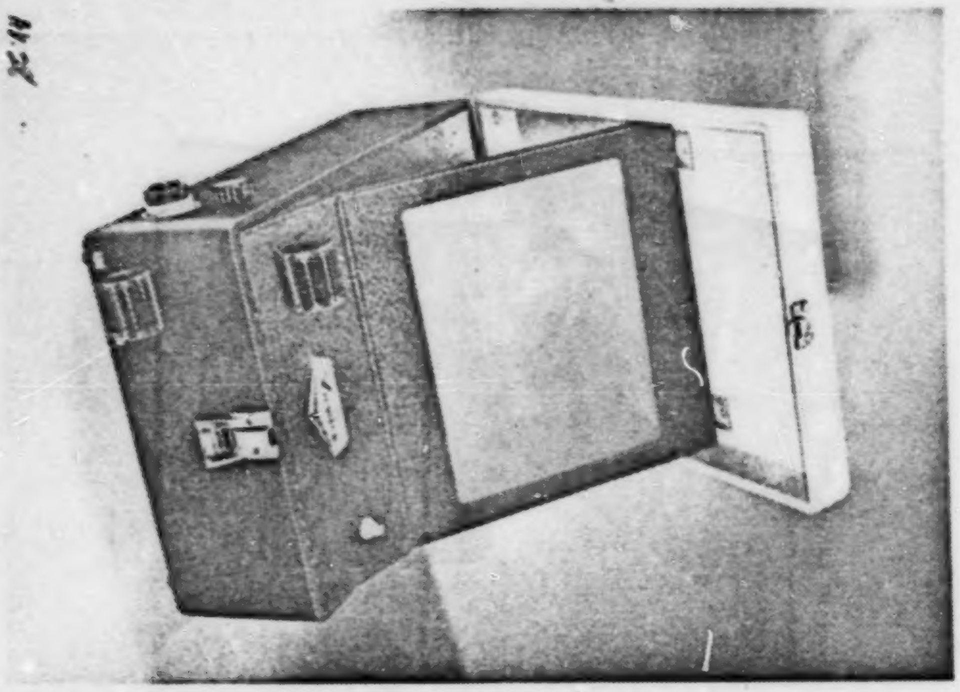


Fig 82

VIEWLEX - filmstrip viewer

Neg. No. 44

Ch. _____ Page _____



Top

VIEWLEX - filmstrip viewer

Fig 83

Neg. No. 238

Ch. ____ Page ____

Top

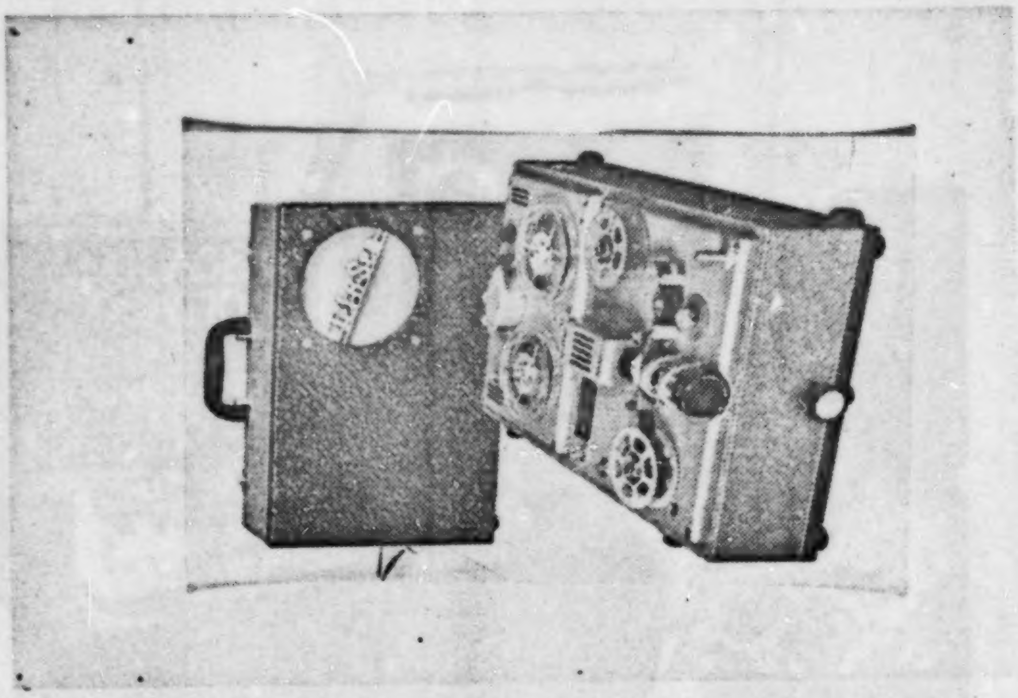


Fig 84

BAPTISTA MISSION —
projector for 16mm filmstrips
synchronized with ¼" tape

Neg. No. 506

Ch. ____ Page ____

Fig 85

ANIRAMA — filmstrip viewer synchronized with tape recorder

Neg. No. ~~688~~ 1027

Ch. _____ Page _____

Fig 86

AUDIO-MASTER — filmstrip advanced manually on cue

Neg. No. 384

Ch. ____ Page ____

Fig 87

Beseler - filmstrip and tape

Neg. No. 376

Fig 88

CAMERA OPTICS – filmstrip and disc; manual advance

Neg. No. ~~[illegible]~~ 1028

Ch. _____ Page _____

Fig 89

Du KANE – filmstrip and disc; automatic advance by inaudible cue. Also available as desk model (Fig. 407)

Neg. No. ~~688~~ 1029

Ch. ____ Page ____

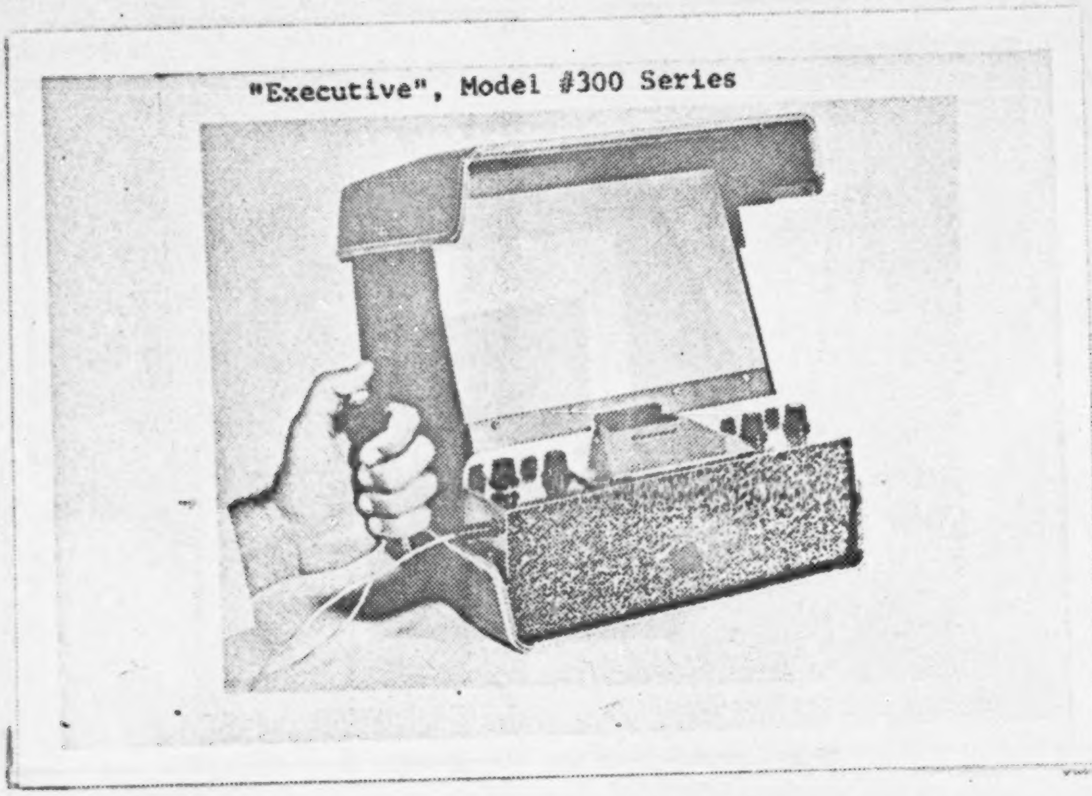


Fig 90

EXECUGRAF — filmstrip cartridge with tape; a desk model also available

Neg. No. 501

Ch. ____ Page ____

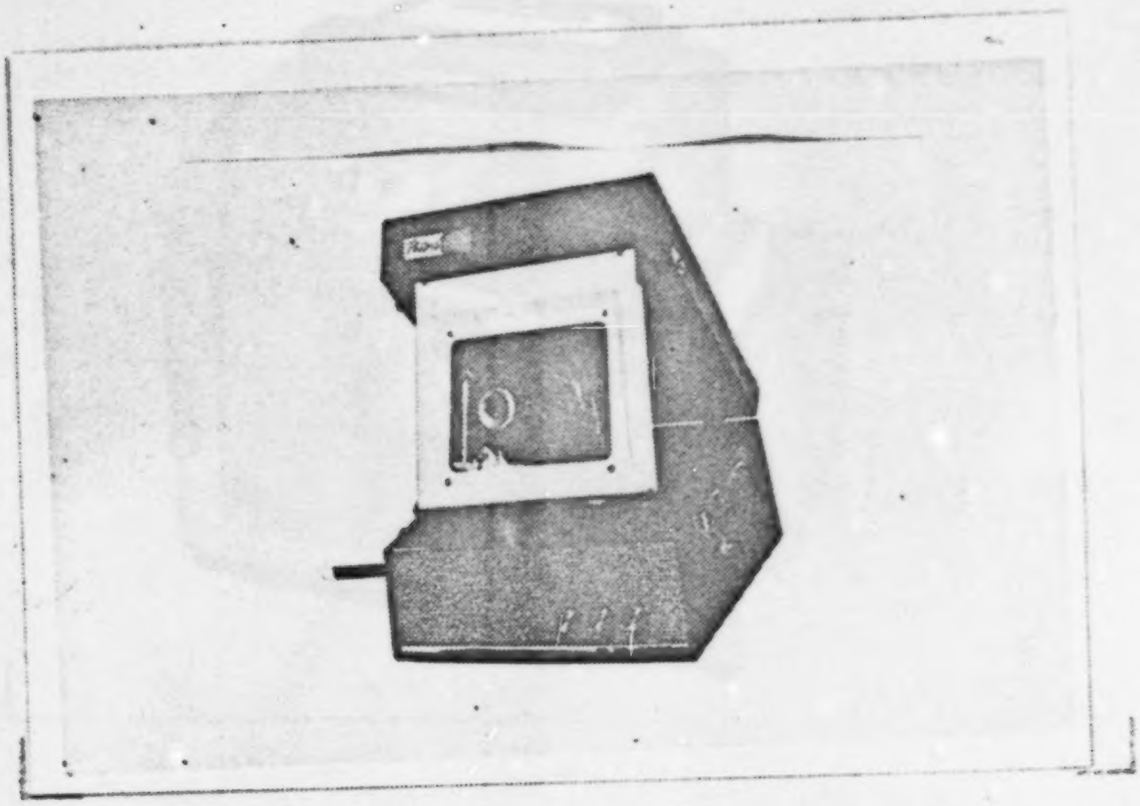


Fig 91

GOTHAM – 16mm
mounted filmstrip with disc

Neg. No. 505

Ch. _____ Page _____

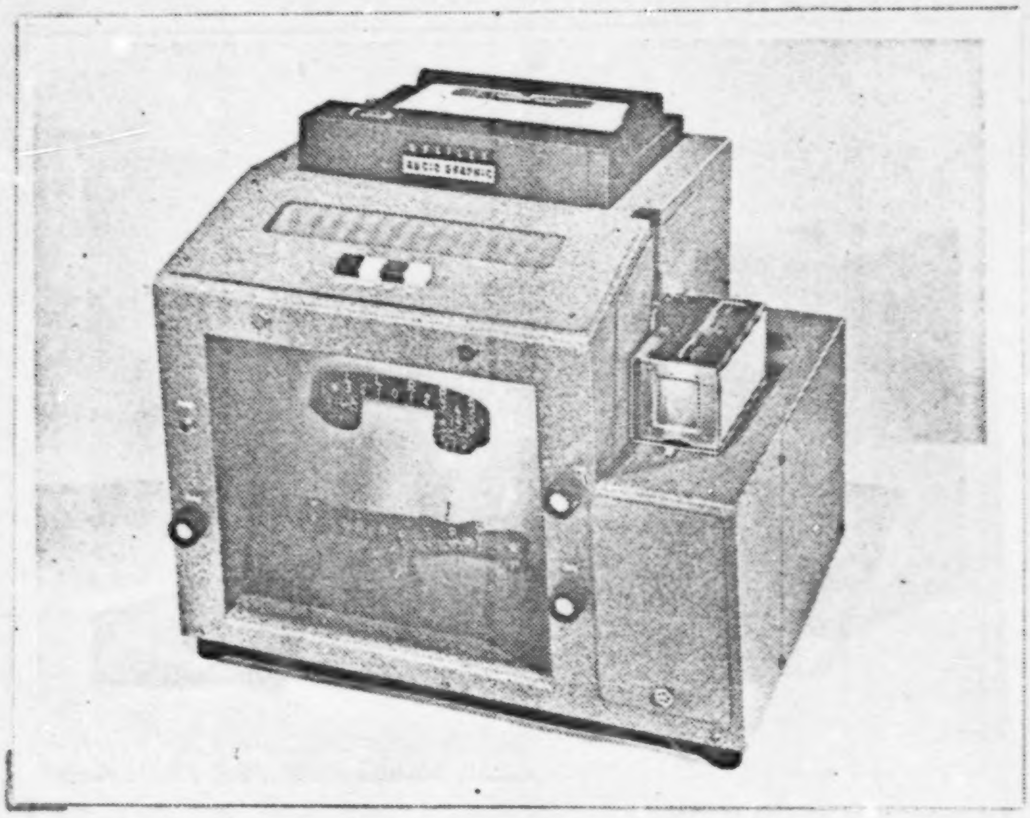


Fig 92

GRAFLEX - slide magazine automatically synchronized with tape cartridge.

Neg. No. ~~609~~ 1030

Ch. ______ Page ______

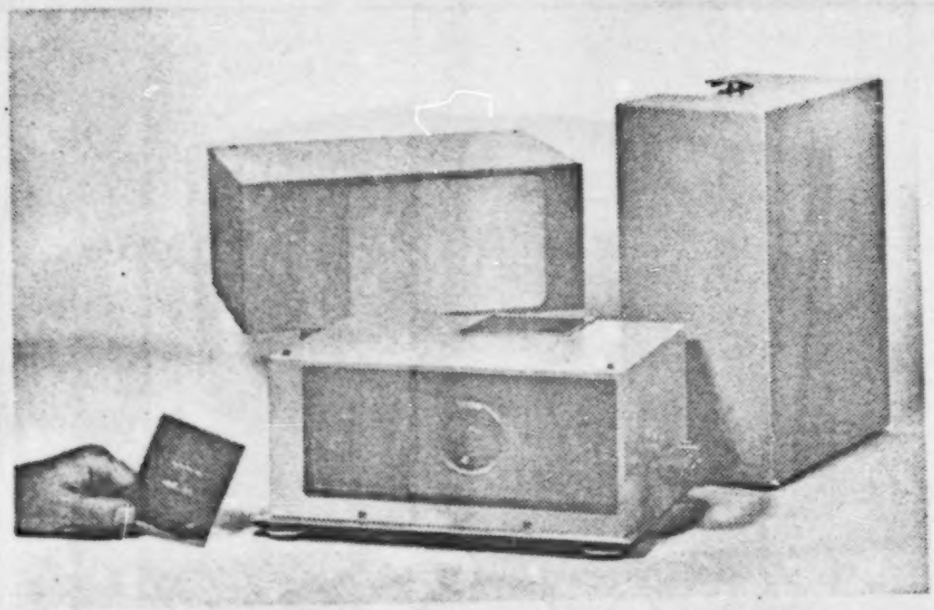


Fig 93

GRAY — integral sound-slides in magazine can be used for regular projection or on rear projection screen.

Neg. No ~~[illegible]~~ 1031

Ch. ______ Page ______

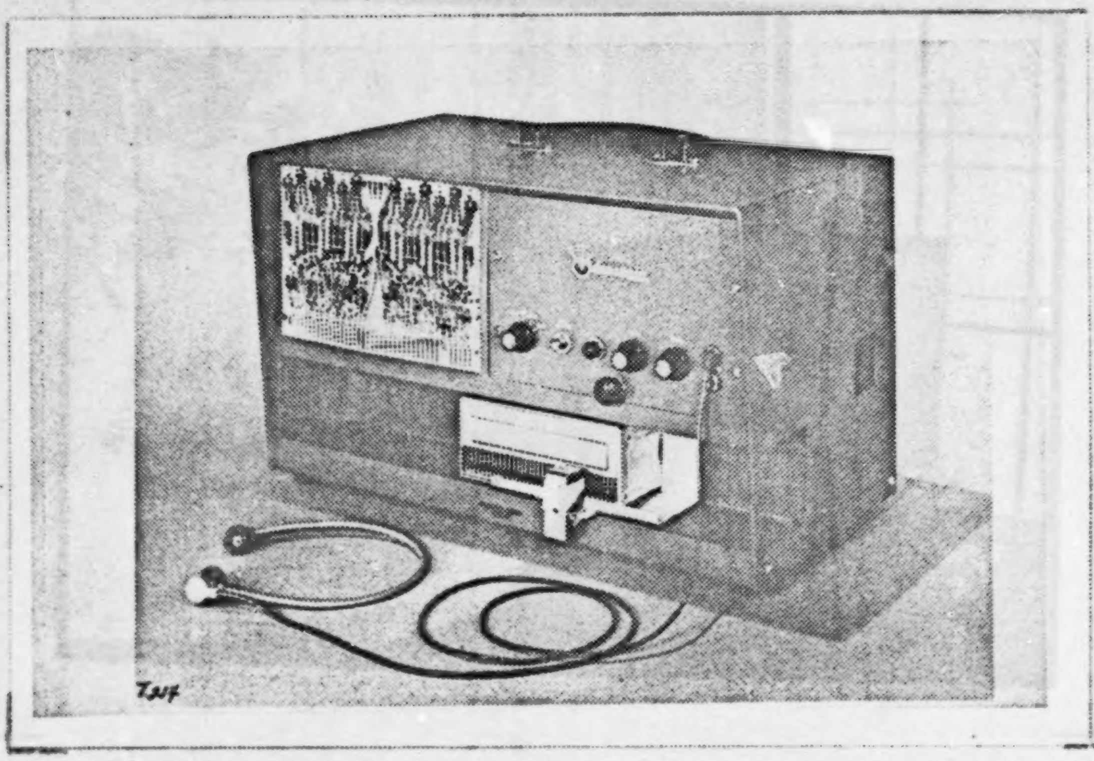


Fig 94

HUGHES — sound-slide with slide ~~cartridge~~ maggzine and tape ~~magazine~~ cartridge. Widely used on industrial assembly lines.

Neg. No. 68

Ch._____ Page_____

FLIP, OVER R to L

Fig 94a Instructors Inc — each slide has its own disc recording in fan-fold envelope

Neg. No. 2006

Ch. ______ Page ______

Fig 95

LA BELLE – continuous tape cartridge and slide magazine

Neg. No. ~~688~~ 1032

Ch. _____ Page _____

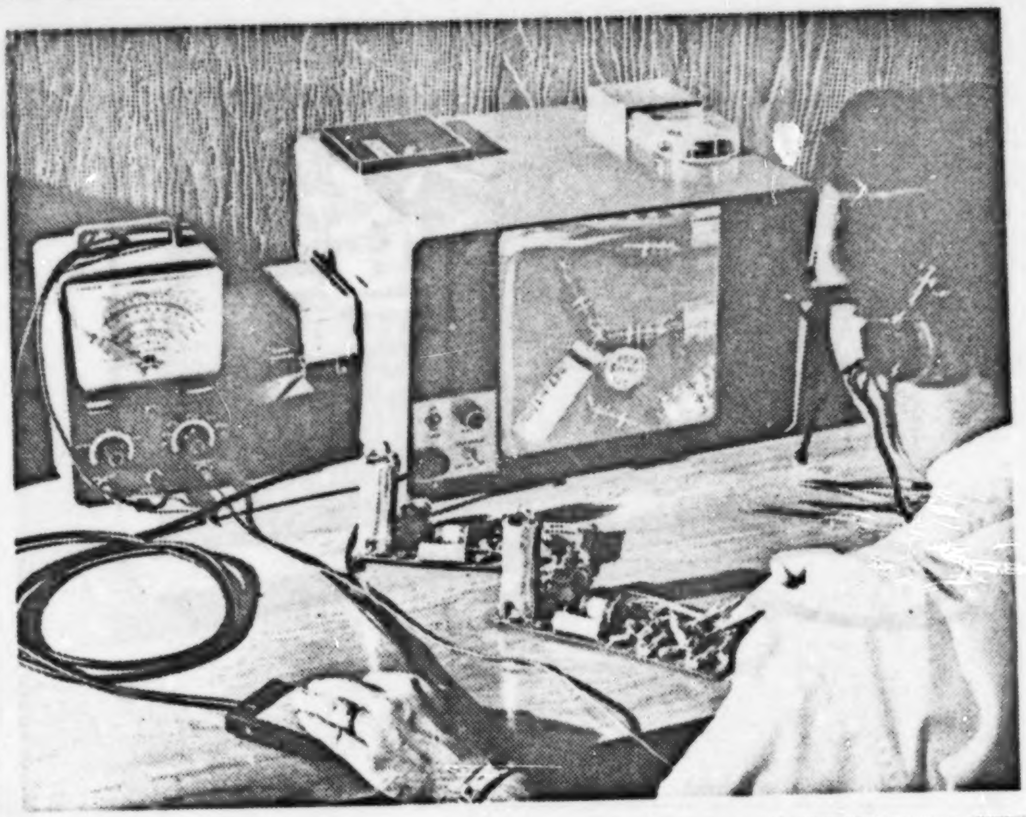


Fig 96

LECTRON – continuous tape cartridge with slide magazine

Neg. No. ~~683~~ 1033

Ch. ______ Page ______

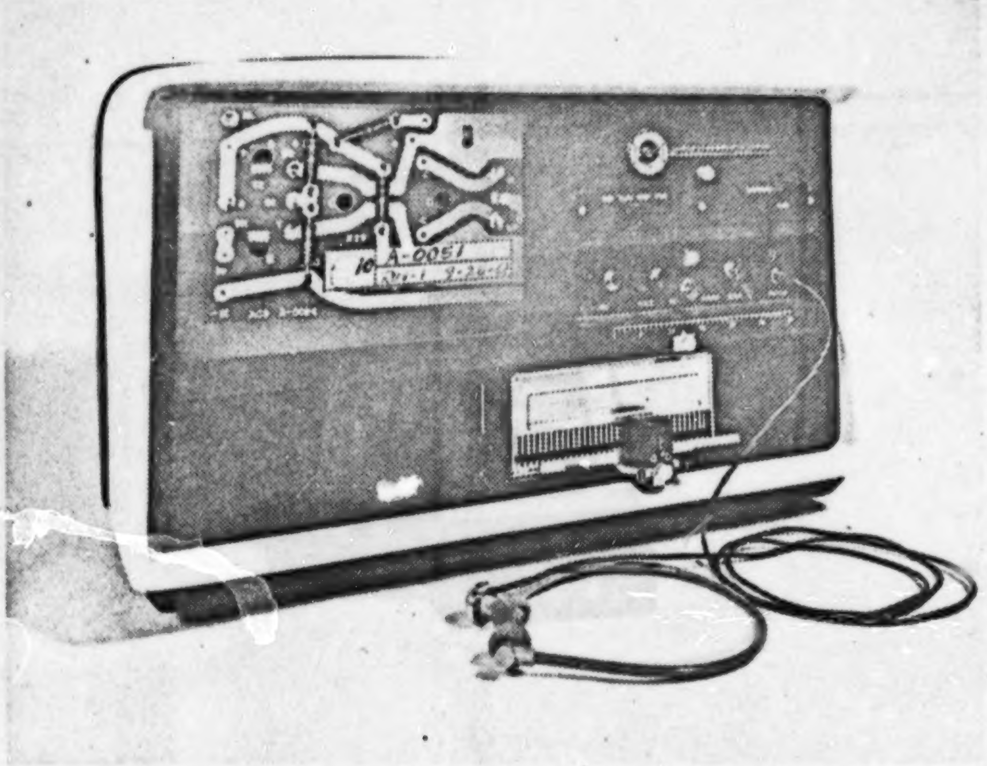
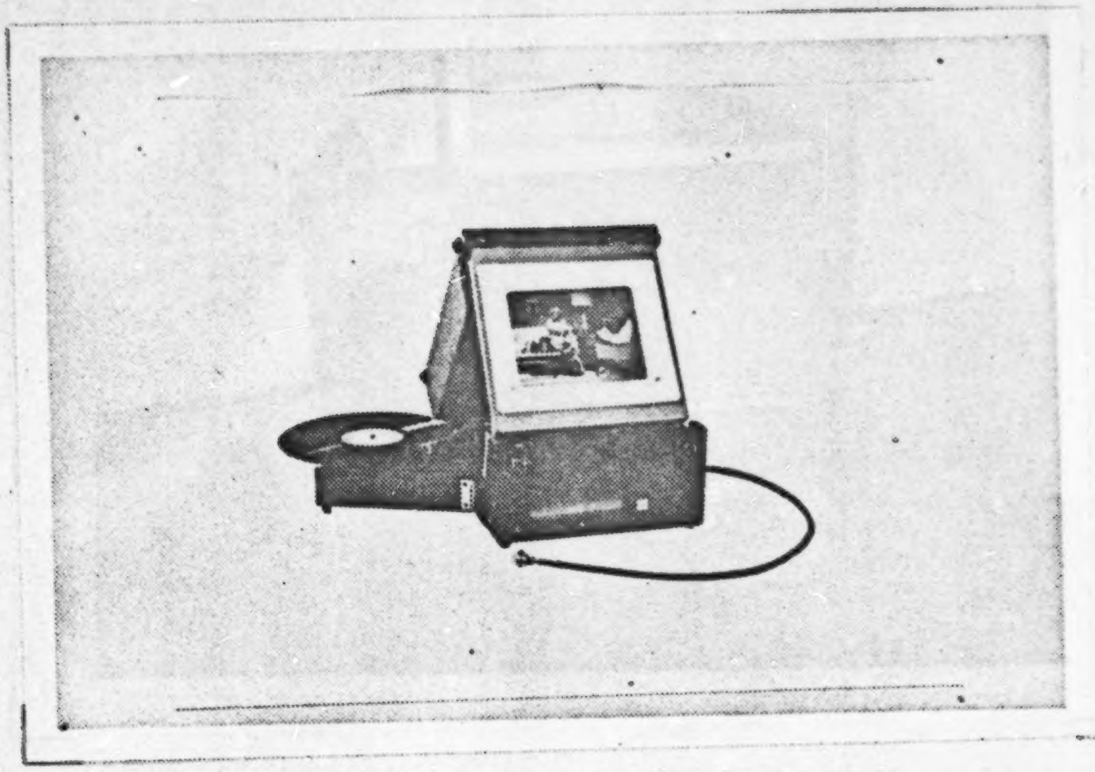


Fig 97

LITTON — reel-to-reel tape cartridge with slide magazine

Neg. No. ~~EJ~~ 1034

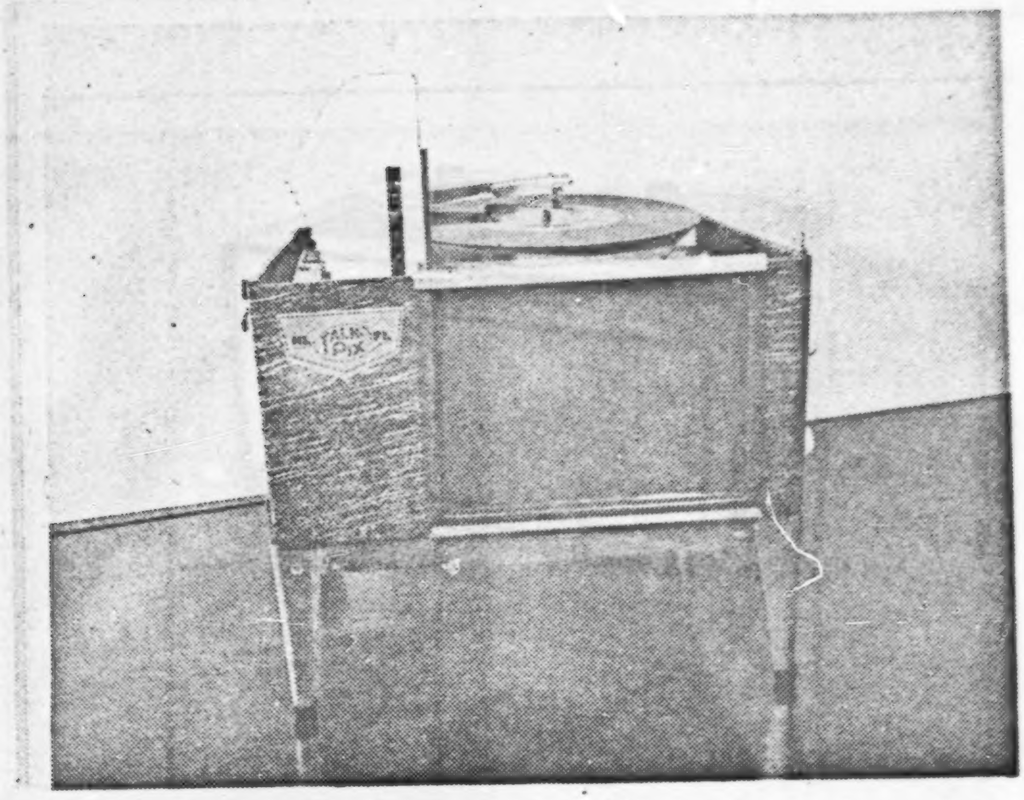
Ch. ____ Page ____



McCLURE — filmstrip and disc; manual advance

Fig 98

Neg. No. 513



Microcopy Inc —

Fig 99 16mm filmstrip mechanically synchronized with transcription arm of record player; permits random access

Neg. No. 1035

Ch. ______ Page ______

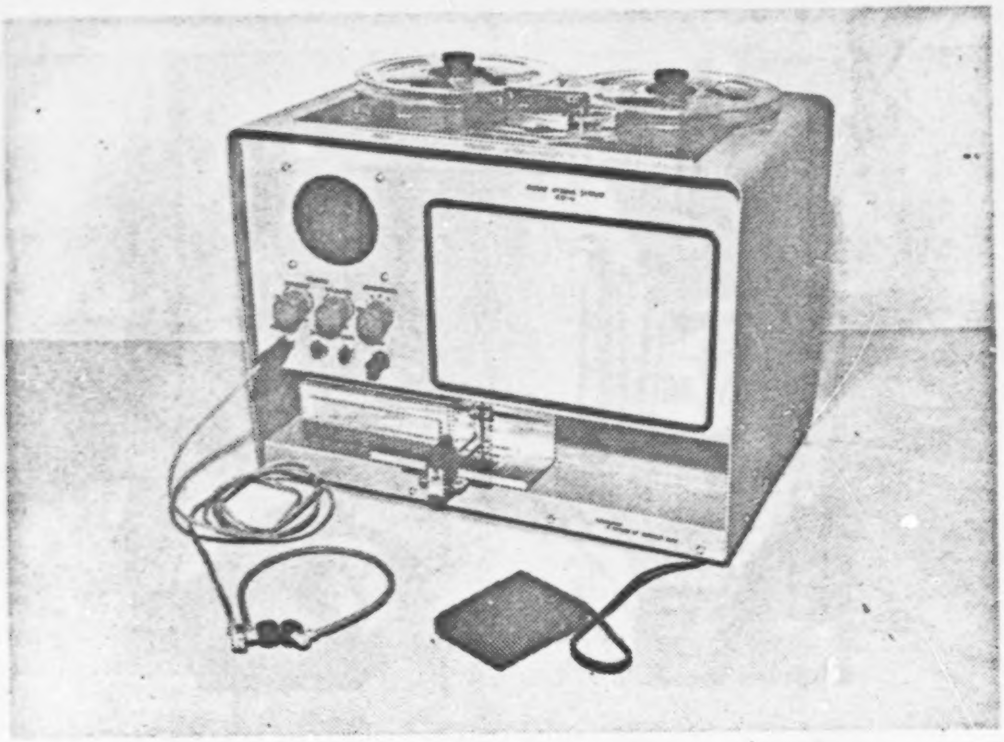


Fig 100 NORTRONICS — tape recorder and slide magazine

Neg. No. ~~690~~ 1035a

Ch. ____ Page ____

Top

Fig 101

Pathé — mounted 16mm filmstrip with disc

Neg. No. 378

Ch. ______ Page ______

Fig 102

RADIO CORPORATION (RCA) — tape cartridge and slide magazine

1036

Neg. No. ~~688~~

Ch. _____ Page _____

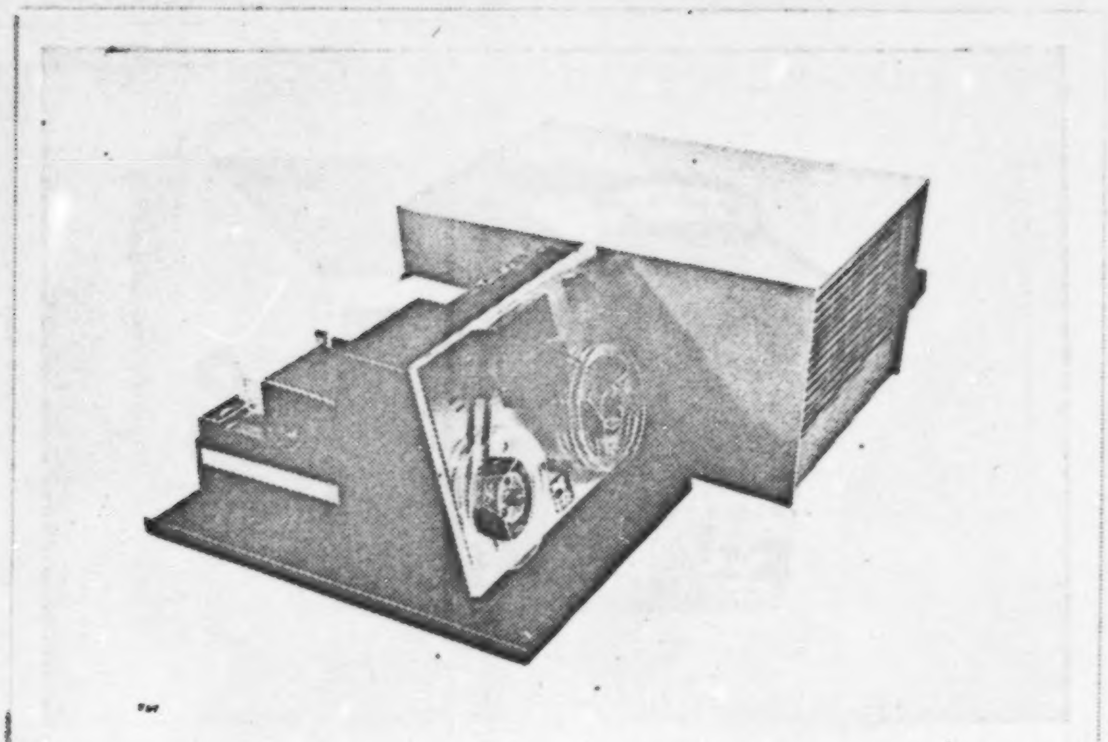


Fig 103

SYNCHROMAT — slide magazine and tape recorder projects on regular screen for group use or small rear projection screen

Neg. No. 381

Ch. ____ Page ____

Top

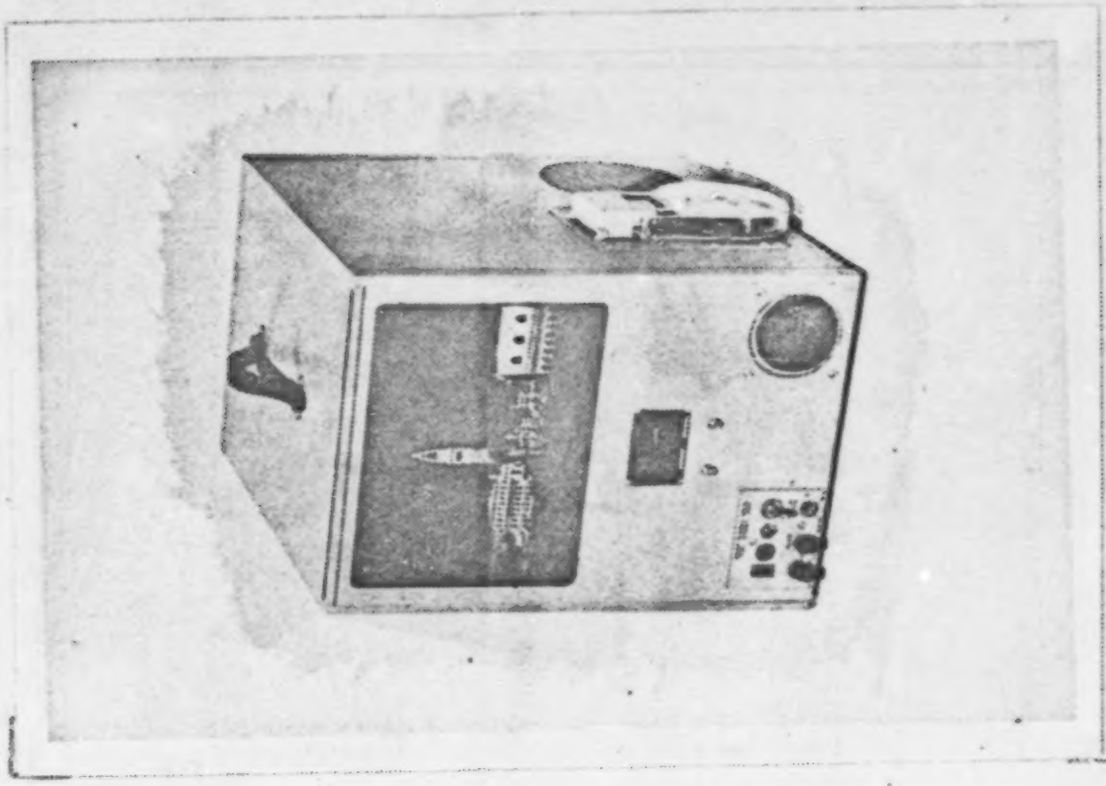


Fig 104

U.S. PROJECTOR CORP. —
16mm filmstrip synchronized with tape cartridge

Neg. No. 385(a8)

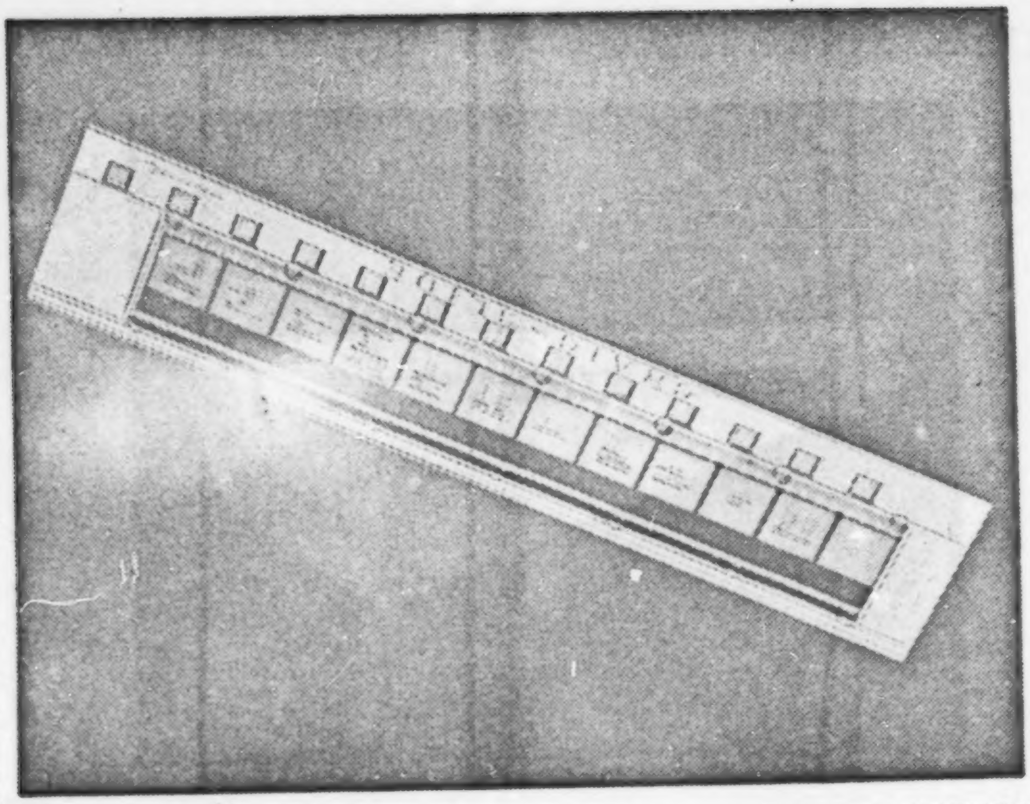
Ch. ____ Page ____

Fig 105

VIEWLEX — filmstrip and tape recorder; alternate model uses record player; manual advance

Reg. No. 387

Ch. ____ Page ____



TOP

CRAIG RESEARCH —
plastic mount facilitates handling
and eliminates film damage

Fig 106

Neg. No. 1037

Ch. ____ Page ____

Top

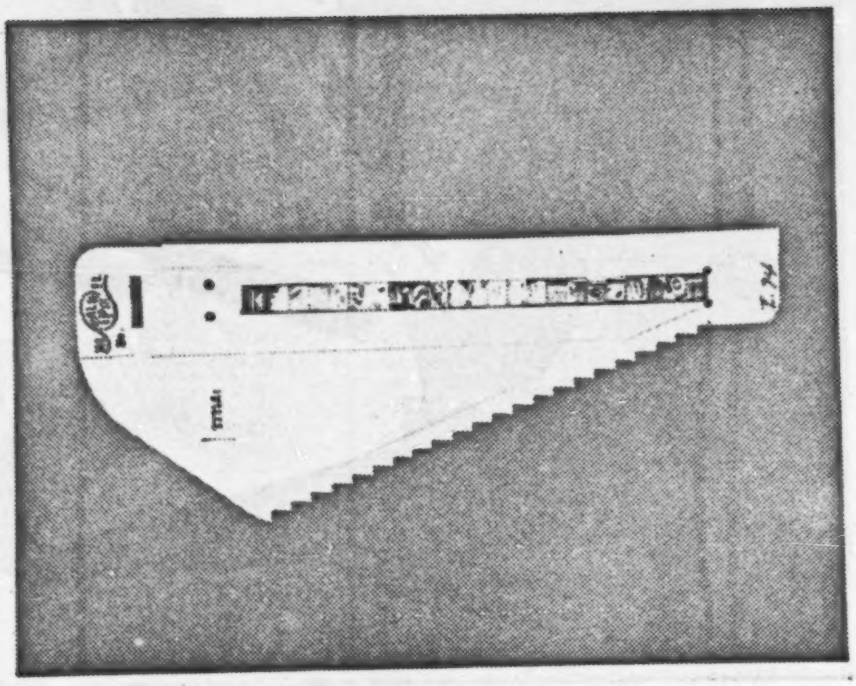


Fig 107

MICROCOPY INC — 16mm filmstrip reduces cost

Neg. No. 388

Ch. _____ Page _____

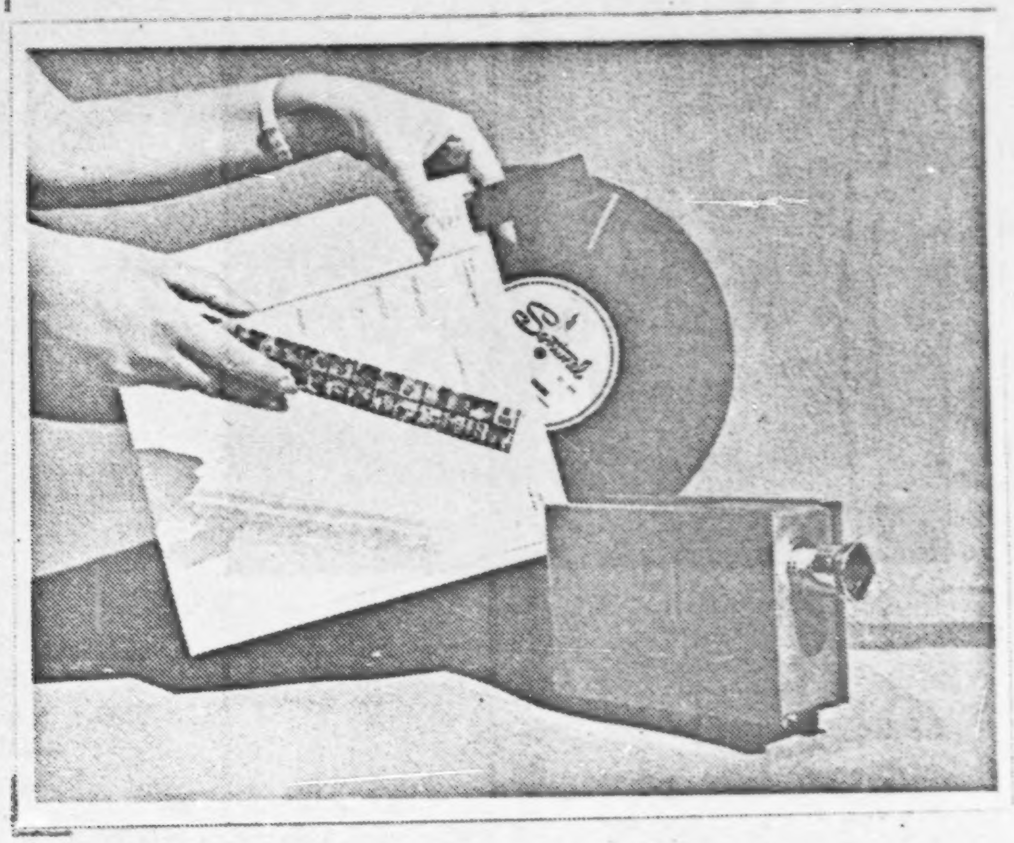


Fig 108

SENTINEL — 35mm filmstrips laminated between plastic are supplied with records and simple projector

Neg. No. ~~6??~~ 1038

Ch._____ Page_____

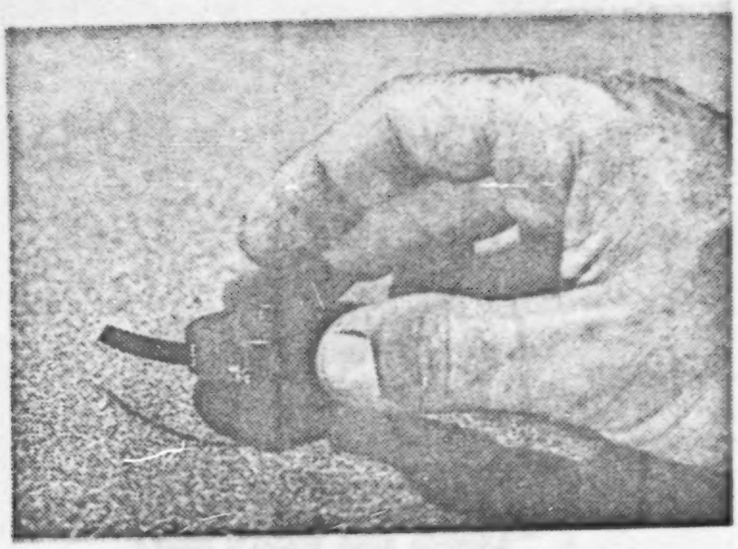


Fig 109 Teaching Machines Inc — Cartridge for 8mm filmstrip

Neg. No. 1248

Ch. ____ Page ____

Top

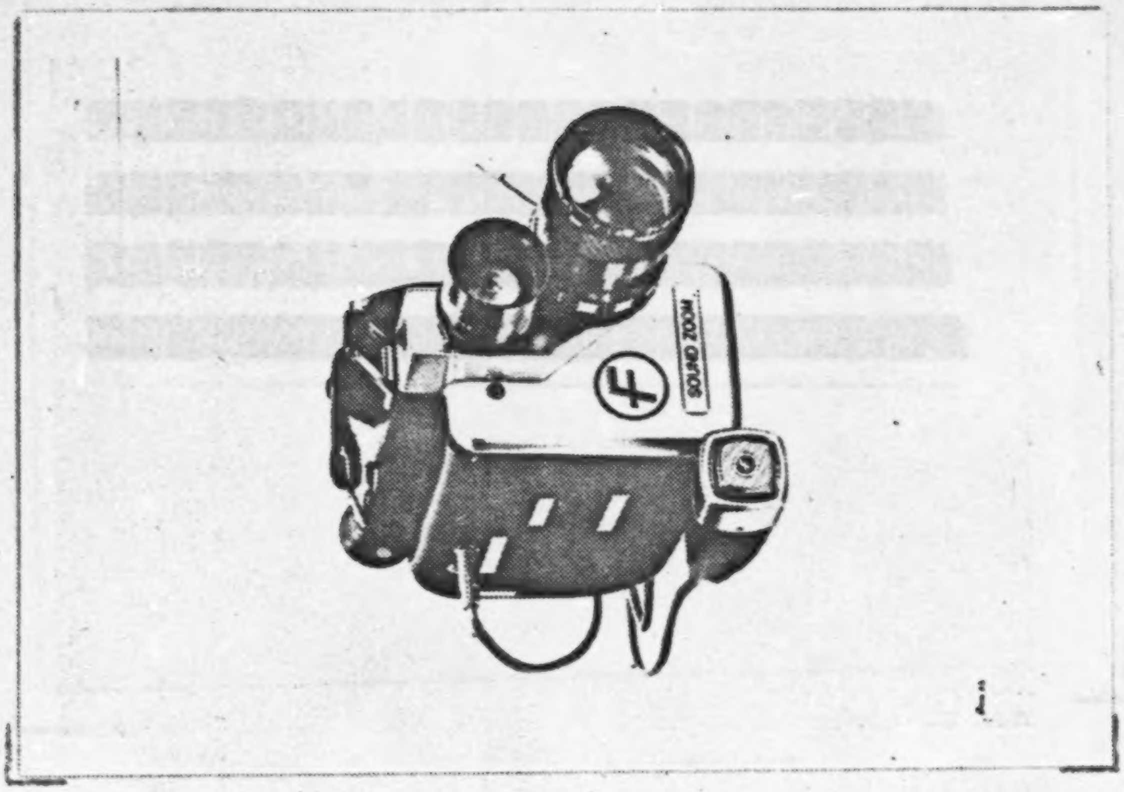


Fig 110

FAIRCHILD — so far the only 8mm camera which records sound

Neg. No. 280

Ch.______ Page______

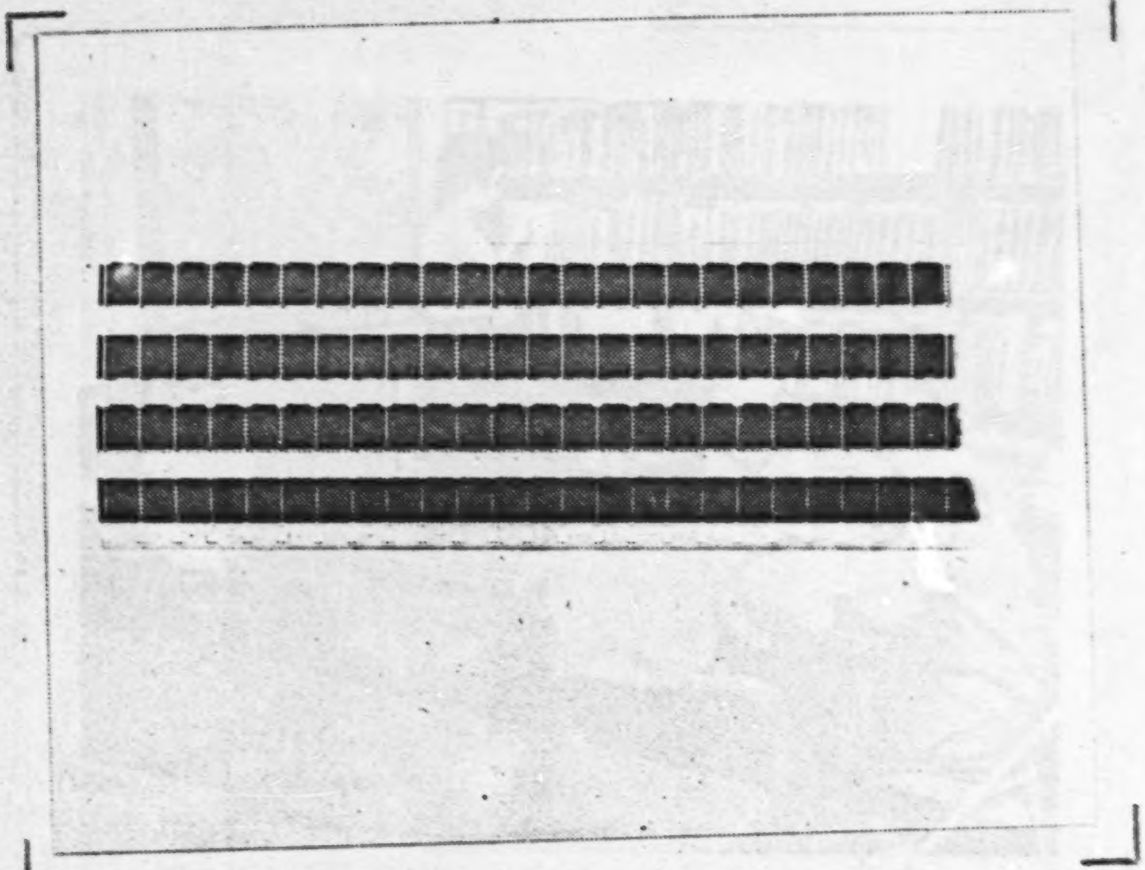
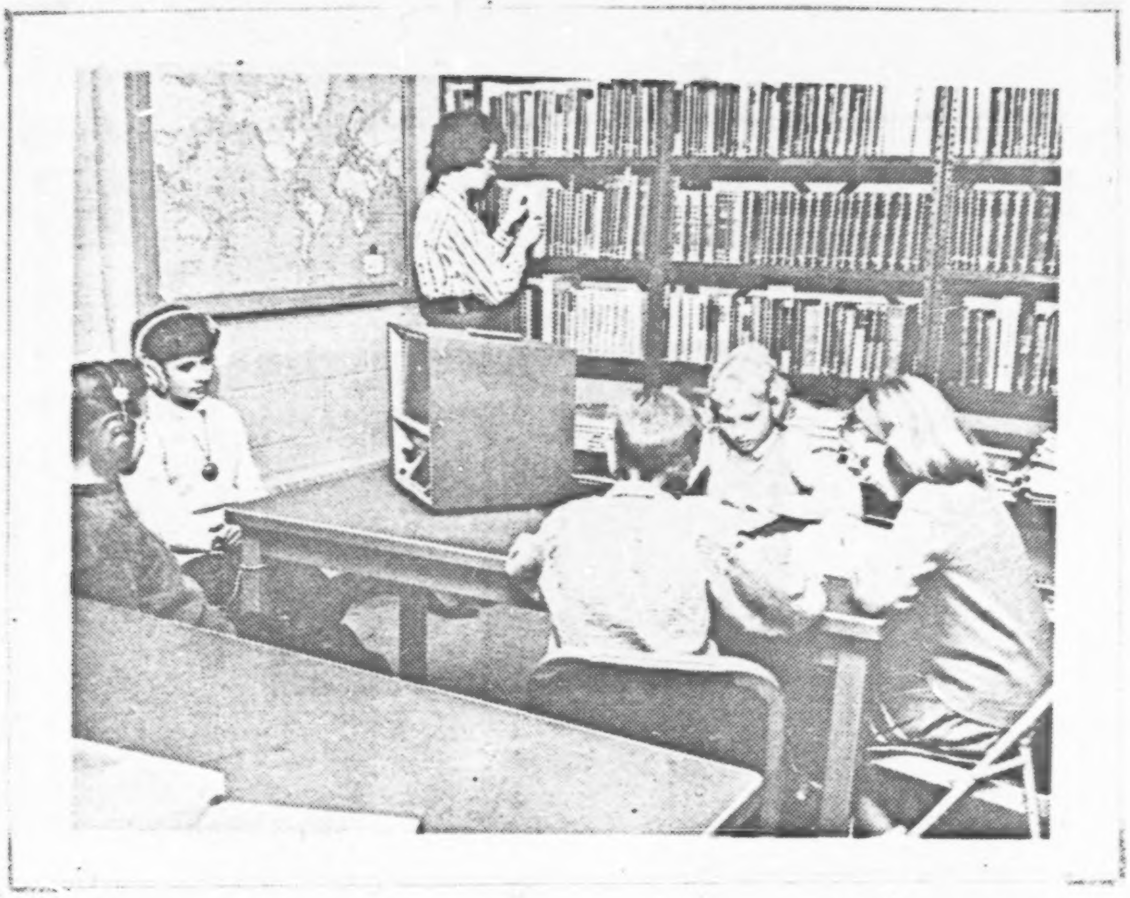


Fig. 111a Technicolor multiple 8mm prints from 35mm film stock, one of the suggested means of reducing film cost.

Neg. No. __________

Ch ______ Page ______



FAIRCHILD — simple design and low mechanical noise enables children to ~~see~~ view films in the library

Fig 111

Neg. No. 1039

Ch. ____ Page ____

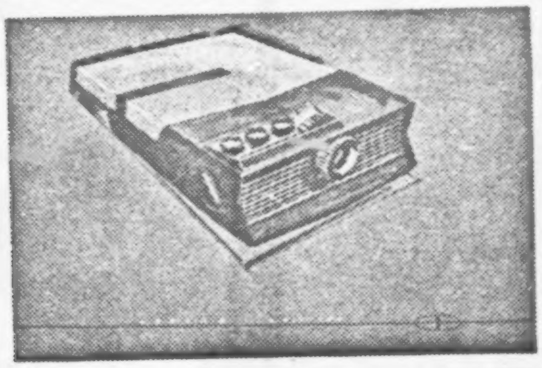


Fig 112

A-16 ENTERPRISES — prototype of a reel-to-reel type film cartridge projector

Neg. No. 544

Ch. _____ Page _____

TOP

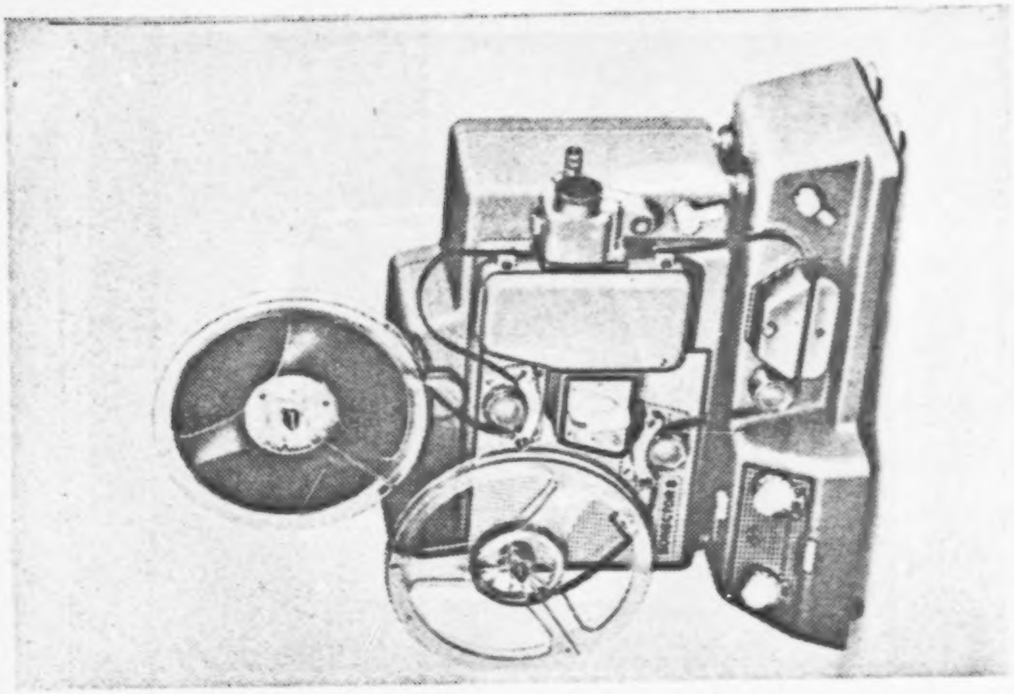


Fig 113

AGFA — 8mm sound projector of conventional design

Neg. No. 531

Ch. ______ Page ______

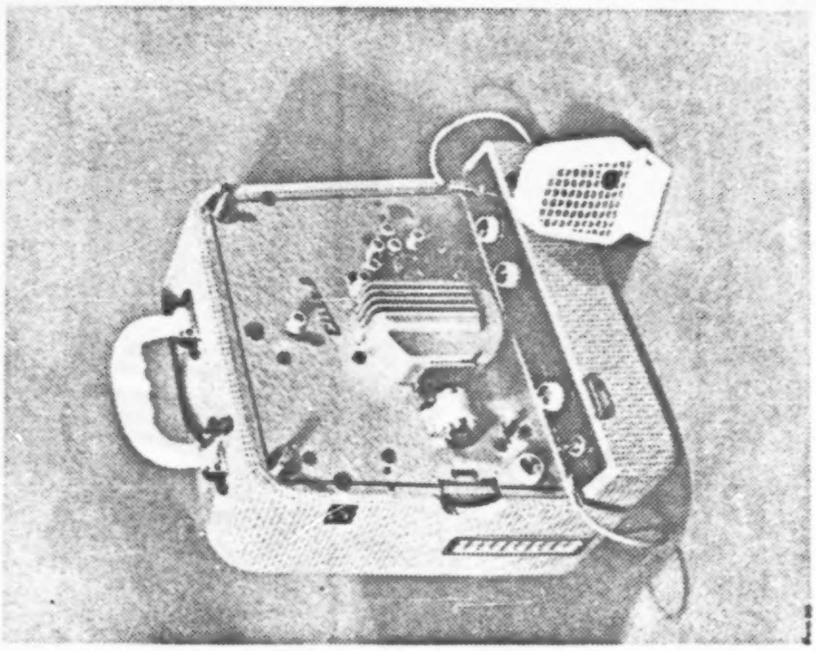


Fig 114

ELITE – 8mm sound

Neg. No 282

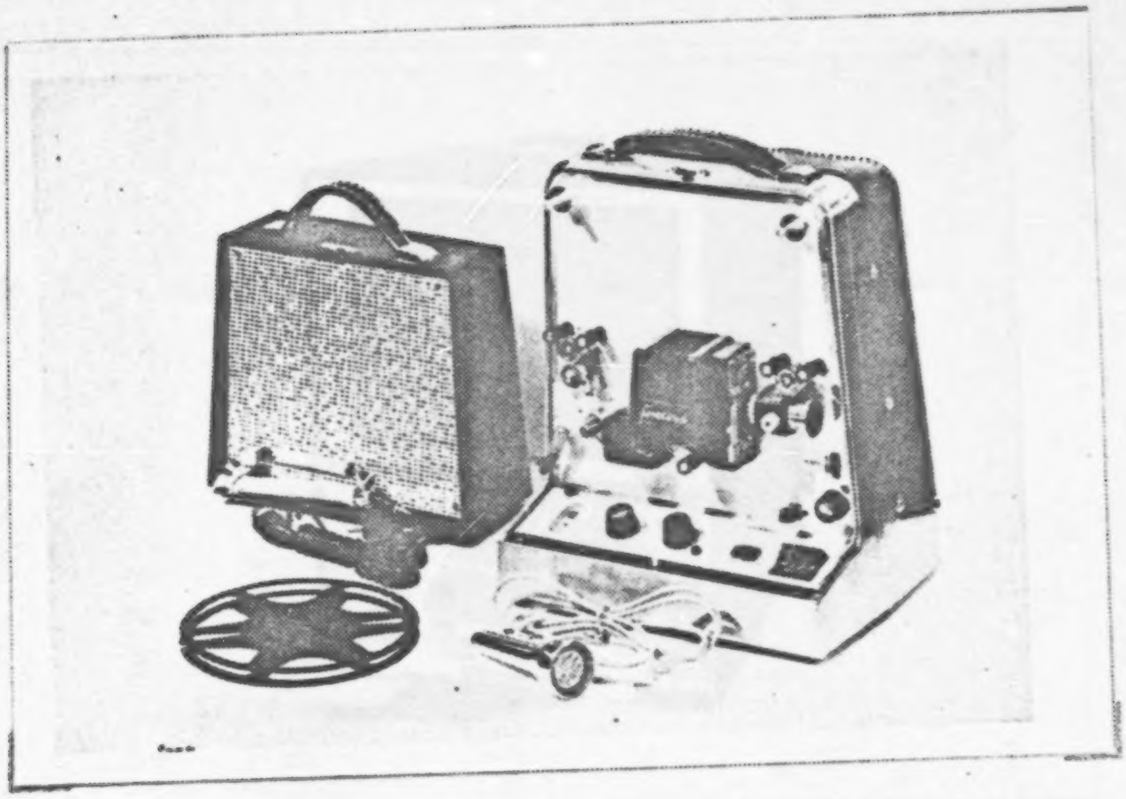


Fig 115

FAIRCHILD - 8mm sound; alternate model uses loop attachment and fold-away rear projection screen for sales display

Neg. No 279

Ch. ____ Page ____

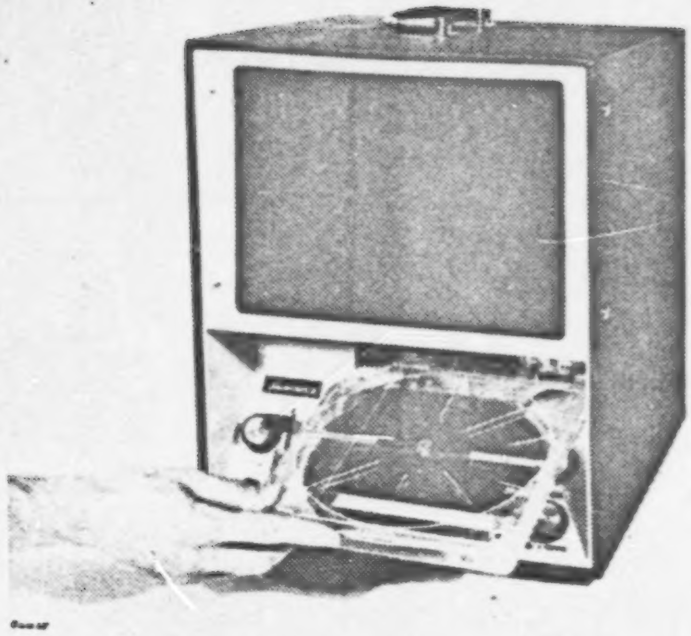


Fig 116

FAIRCHILD — continuous loop cartridge and integral rear projection screen ~~for sales display~~

Neg. No. 281

Ch. ____ Page ____

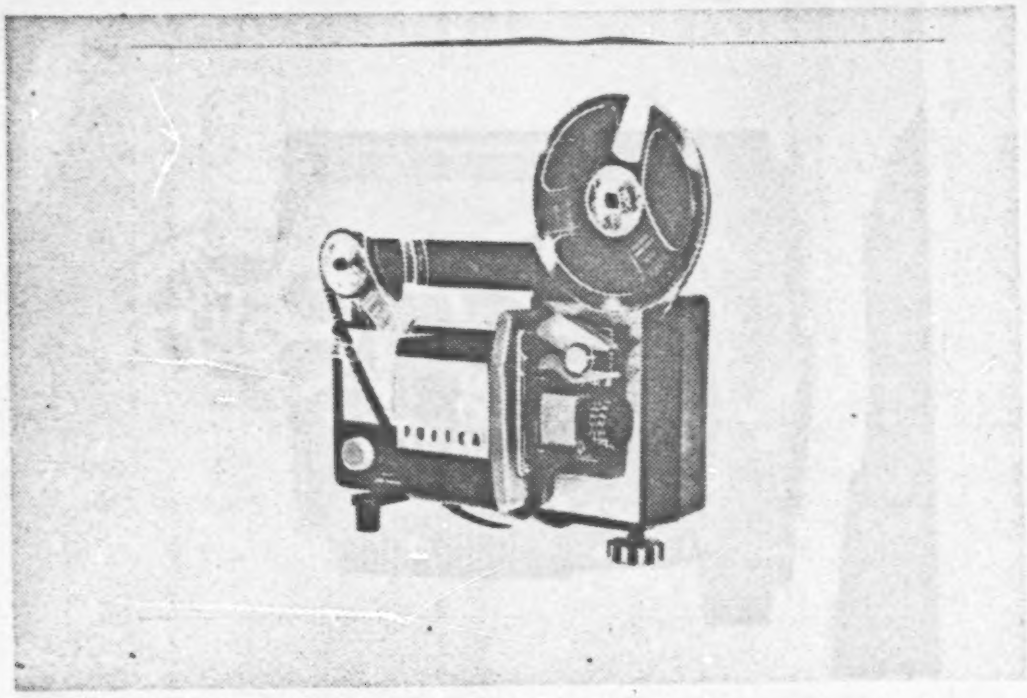


Fig 117

FUJICA — 8mm sound

Neg. No. 503

Ch. ____ Page ____

TOP

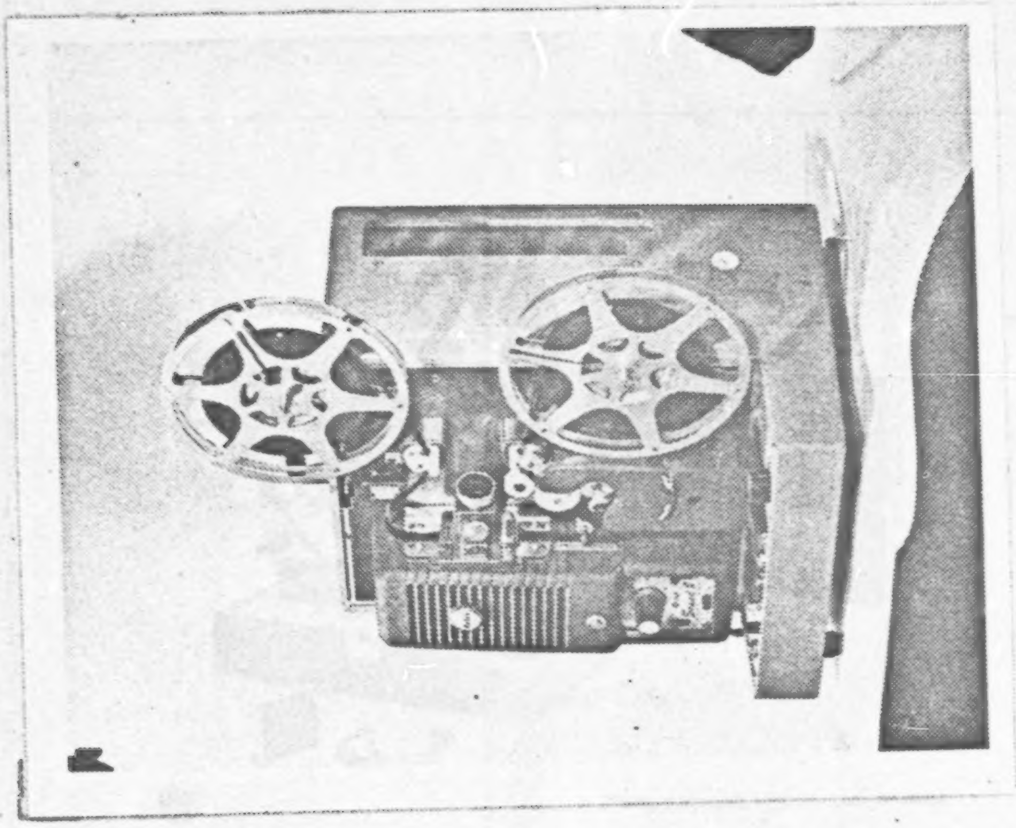
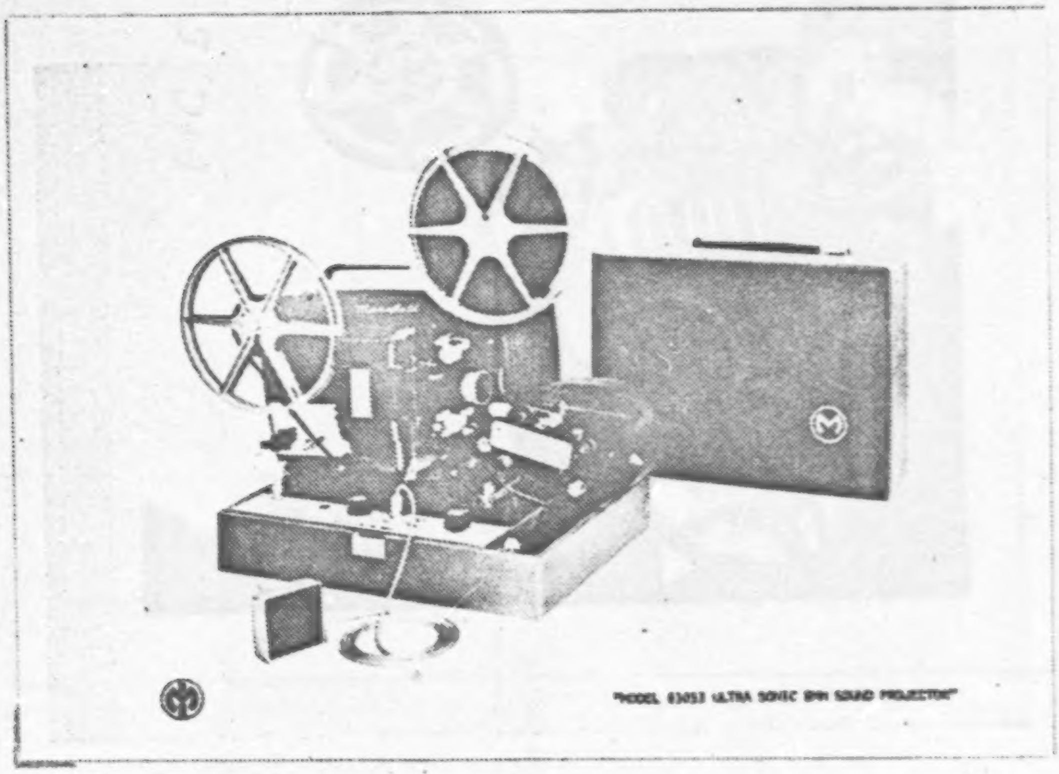


Fig 118

EASTMAN KODAK — 8mm sound

Neg. No. ~~F08~~ 1040

Ch. _____ Page _____



MANSFIELD – 8 mm sound

Fig 119

Neg. No. 2187

Ch. ____ Page ____

TOP

FIG. 5.

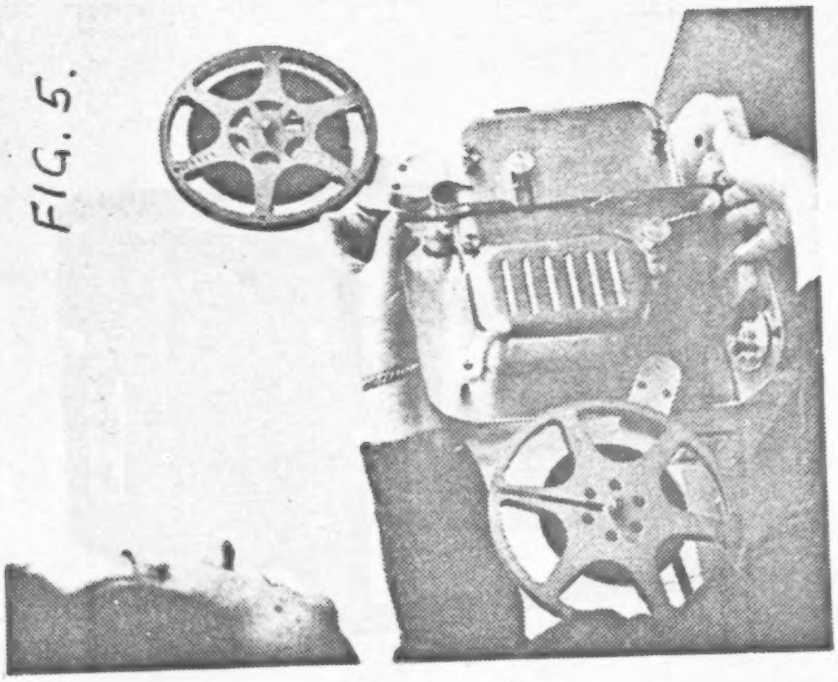


Fig 120

MAURER – 8mm sound on film; semi-automatic threading

Neg. No. 283

Ch. ______ Page ______

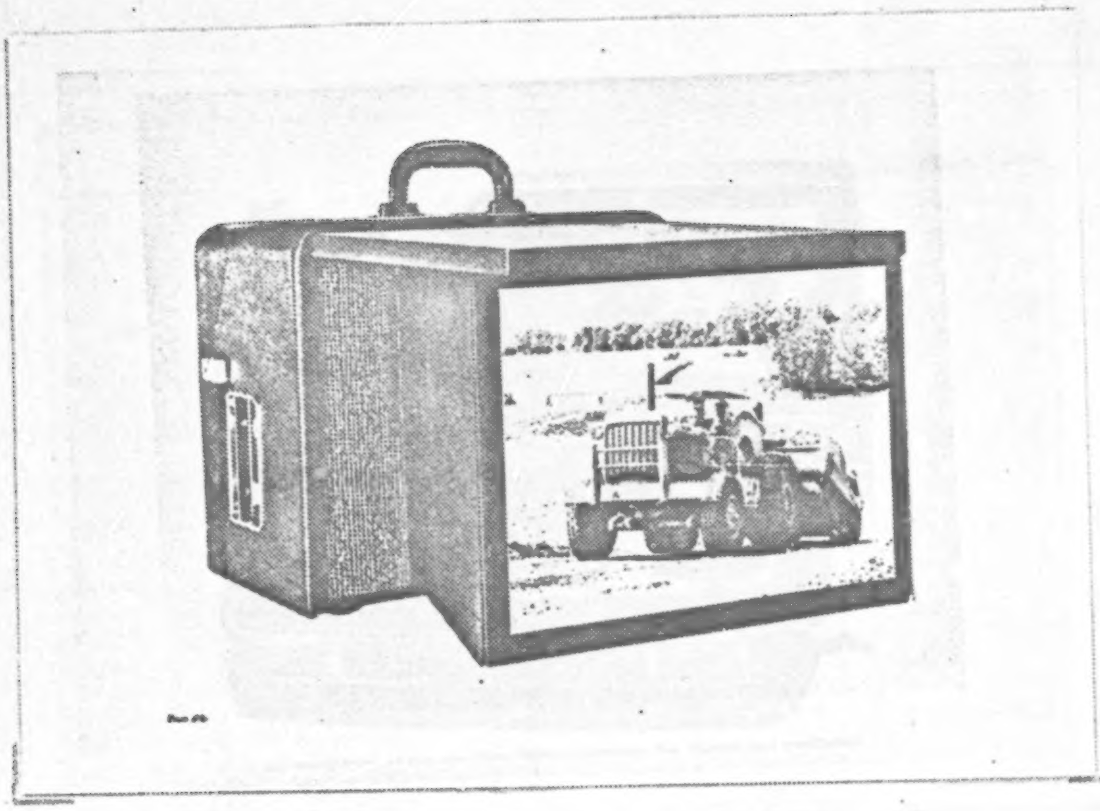


Fig 121 MPO VIDEOTRONICS — loop attachment and fold-away rear projection screen

Neg. No 289

Fig 122

Nizo — 8mm sound projector departs from conventional design

Neg. No. 488

Ch._____ Page_____

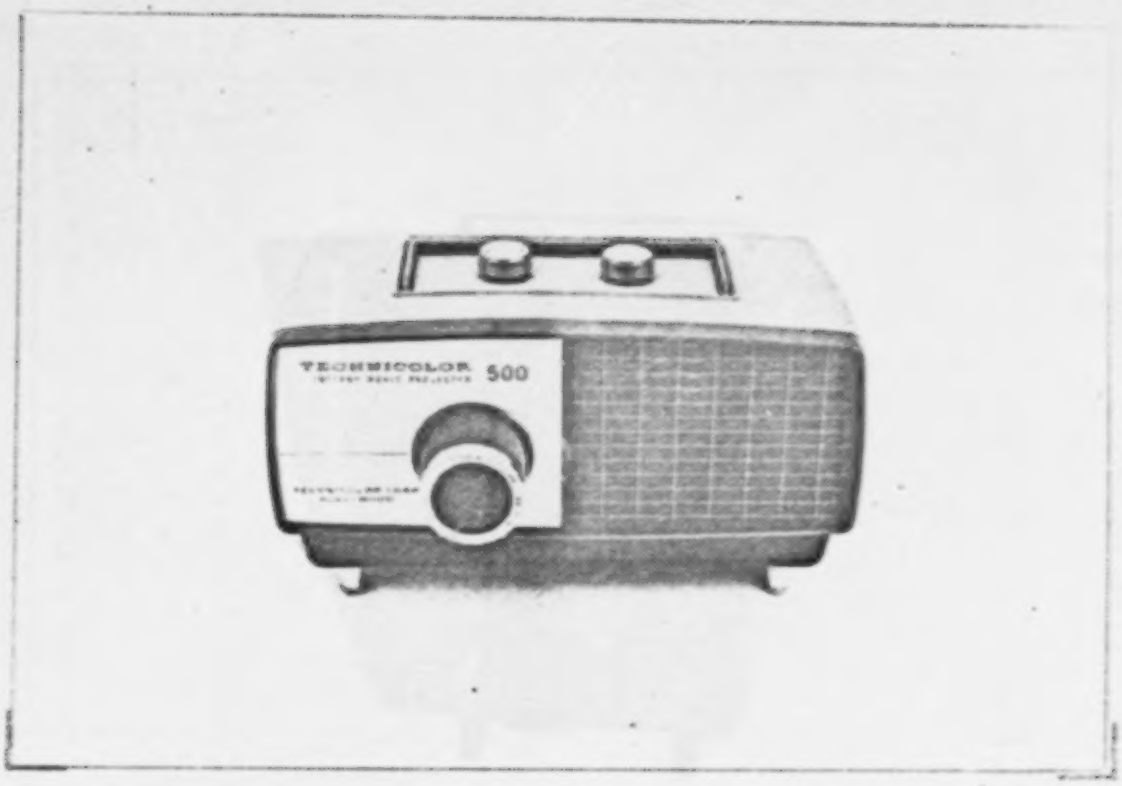


Fig 123

TECHNICOLOR — inexpensive silent projector uses loop cartridge

Neg. No. 284

Ch. _____ Page _____

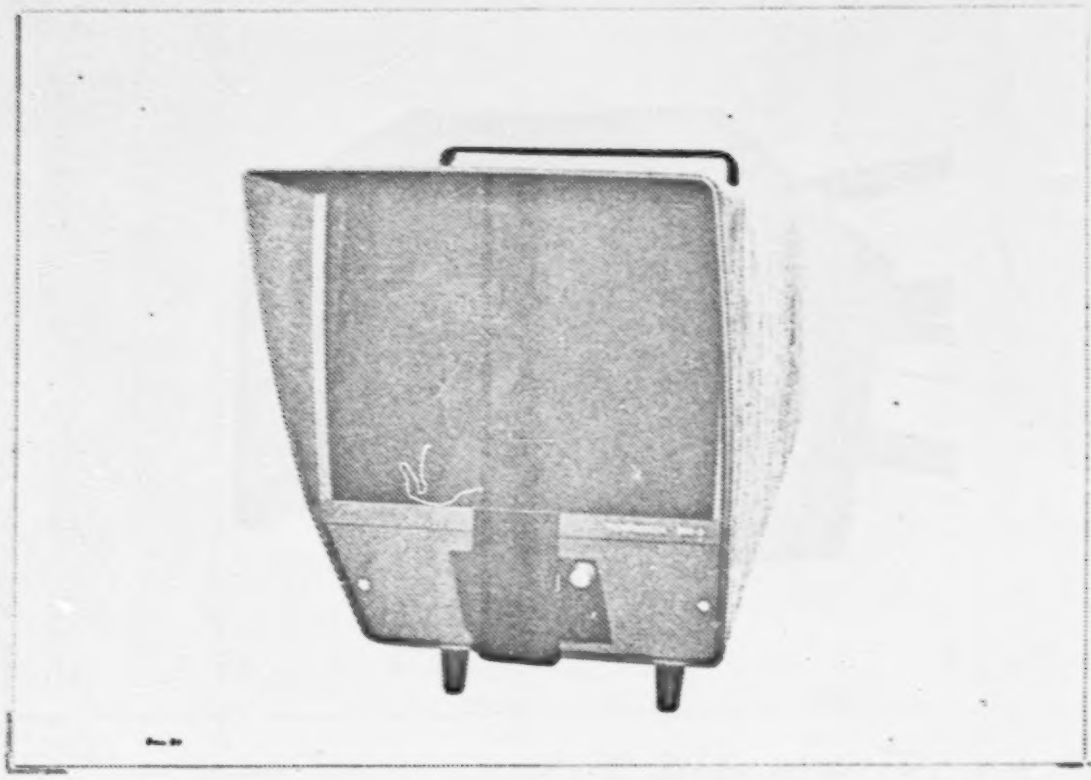


Fig 124 TECHNICOLOR - reflex box for 8mm projector

Neg. No 285

Ch. ______ Page ______

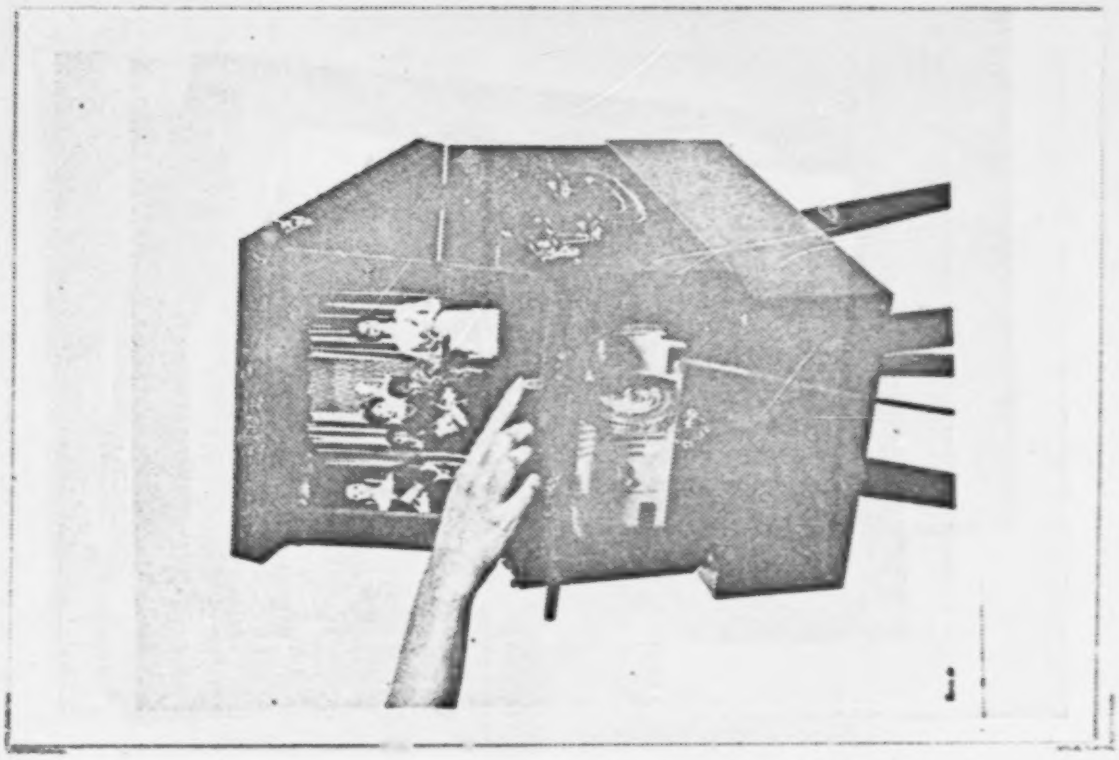


Fig 125

A-N Manufacturing Co. — reflect
~~TECHNICOLOR~~
box for Technicolor projector
Box ~~by~~
~~A-N Manufacturing~~ Co.

Neg. No 39

Ch. ____ Page ____

Fig 126

Vicom — 8mm sound uses loop attachment and fold-away screen

Neg. No. ~~70~~ 81041

Ch. ____ Page ____

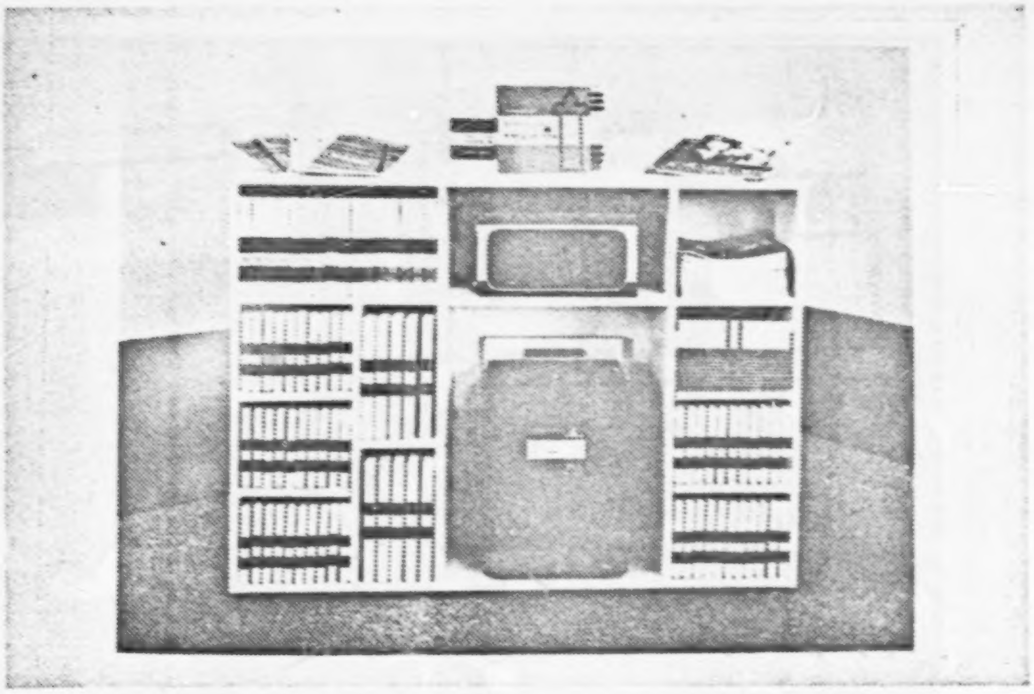


Fig 127 HEATH DE ROCHEMONT - kit of materials includes 8mm sound projector.

Neg. No. 390

Ch. ______ Page ______

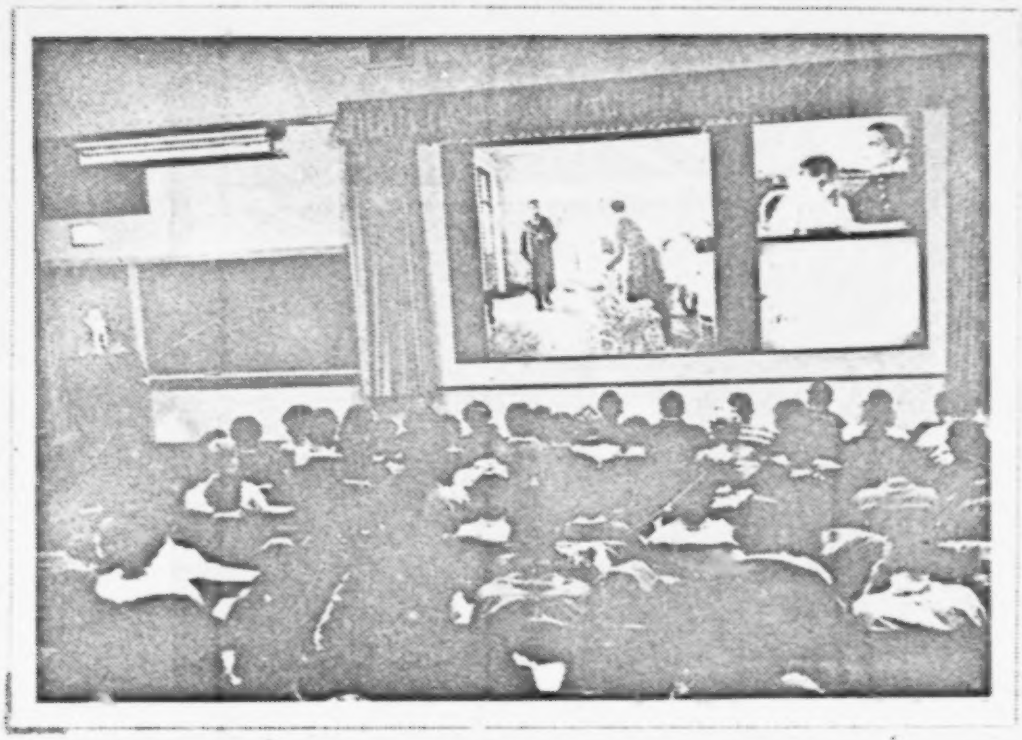


Fig 128 TELEPROMPTER — three screen presentation at the University of Wisconsin

Neg. No ~~641~~ 1043

Ch. ____ Page ____

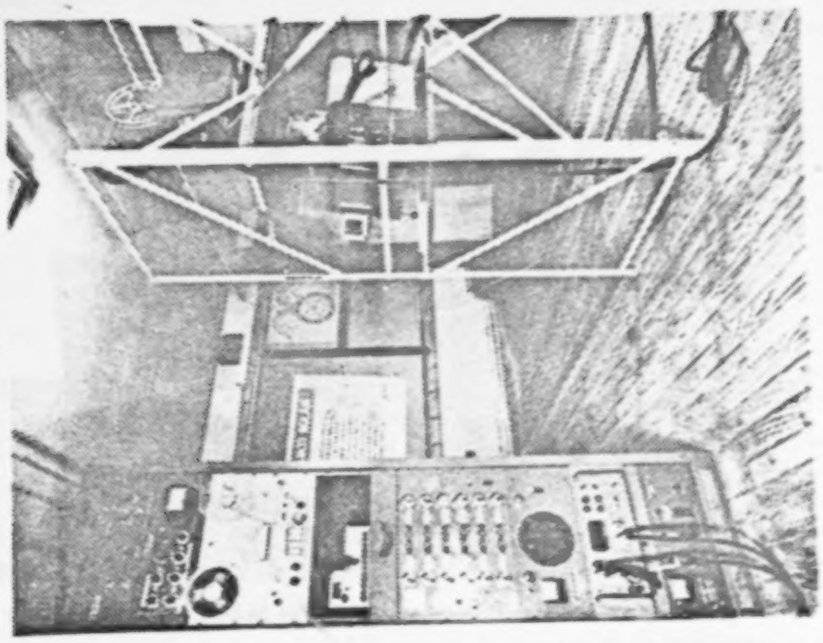
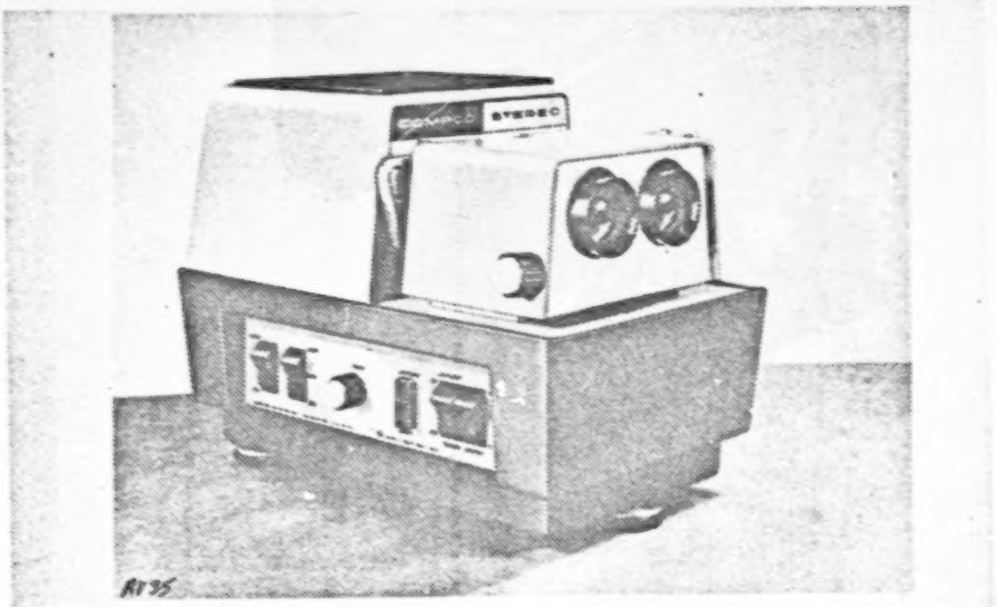


Fig 129

TELEPROMPTER ~~(equipment)~~ — equipment behind screen includes programmer and amplifiers (left) and an array of projection equipment (right)

Neg. No. 398

Ch. ______ Page ______



COMPCO MODEL NO. [illegible] NEW STEREO PROJECTOR

COMPCO CORPORATION [illegible] SPAULDING AVE., CHICAGO 47, MADE IN THE U.S.A. PHOTO NO. [illegible]

Fig 130

Compco – stereo projector for 35mm slides

Neg No 239

Ch. ______ Page ______

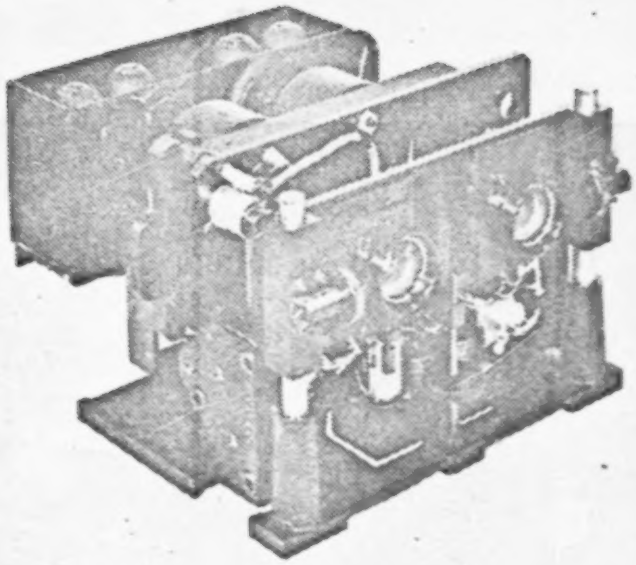


FIGURE 7. THREE-DIMENSIONAL PLOTTING PROJECTOR

Fensko, Fedrick, & Miller —

Fig 131

3-dimensional projector used in Iconorama system (see Fig 136a, b, c)

Neg. No. 1044

Ch: ______ Page ______

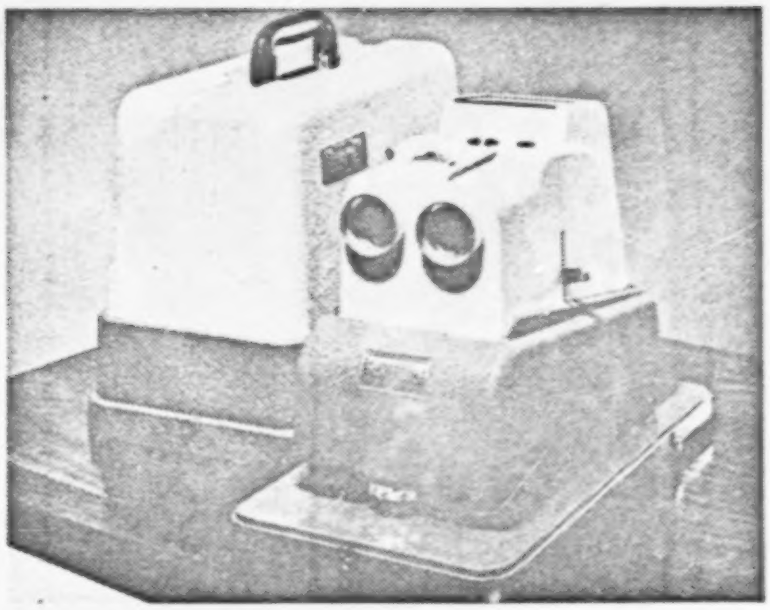


Fig 132 I

SAWYER – projector for disc mounted slides in Fig. 133

Neg. No. 451

Ch. ______ Page ______

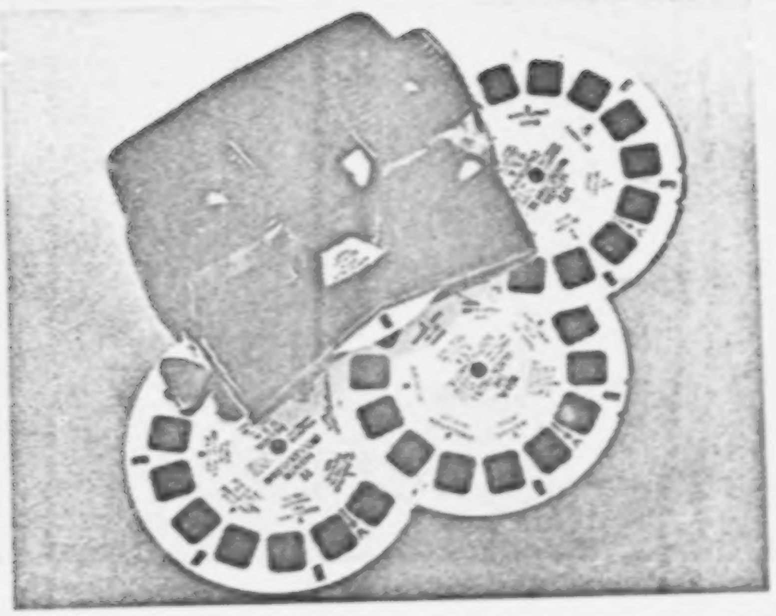


Fig 133

SAWYER — ~~Hm~~ 3-D slides and viewer

Neg. No 446

Ch. _____ Page _____

Fig. 134

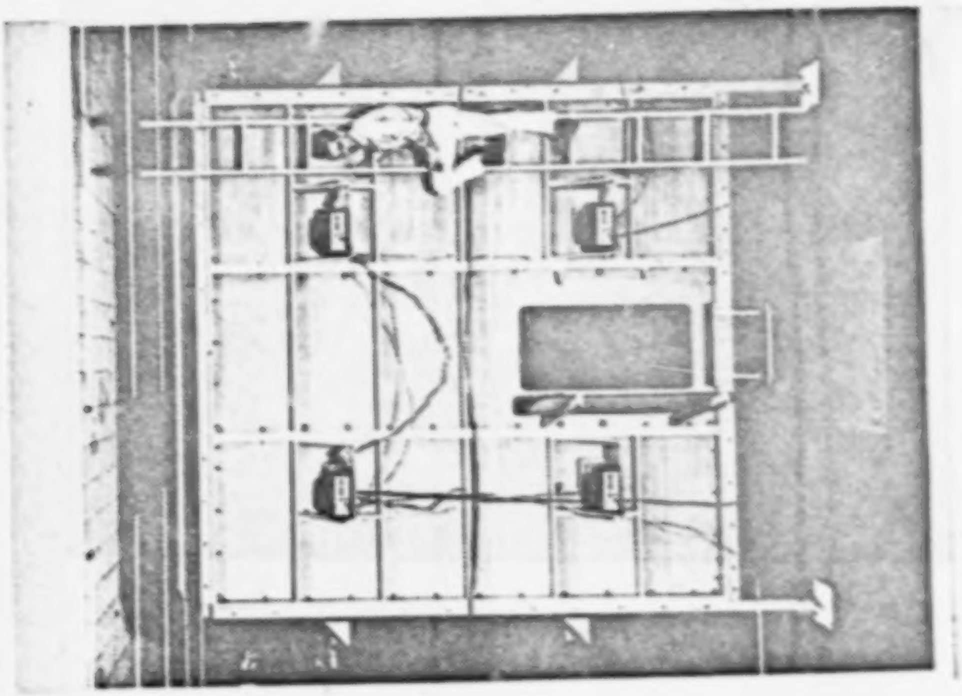
THE KNOWLEDGE BOX —

ILLINOIS INSTITUTE OF TECHNOLOGY

Neg. No. 127

Ch. _____ Page _____

TOP



"THE KNOWLEDGE BOX" —

Fig 135

[PROJECTORS MOUNTED ON
ONE OUTSIDE WALL]

Neg. No. 126

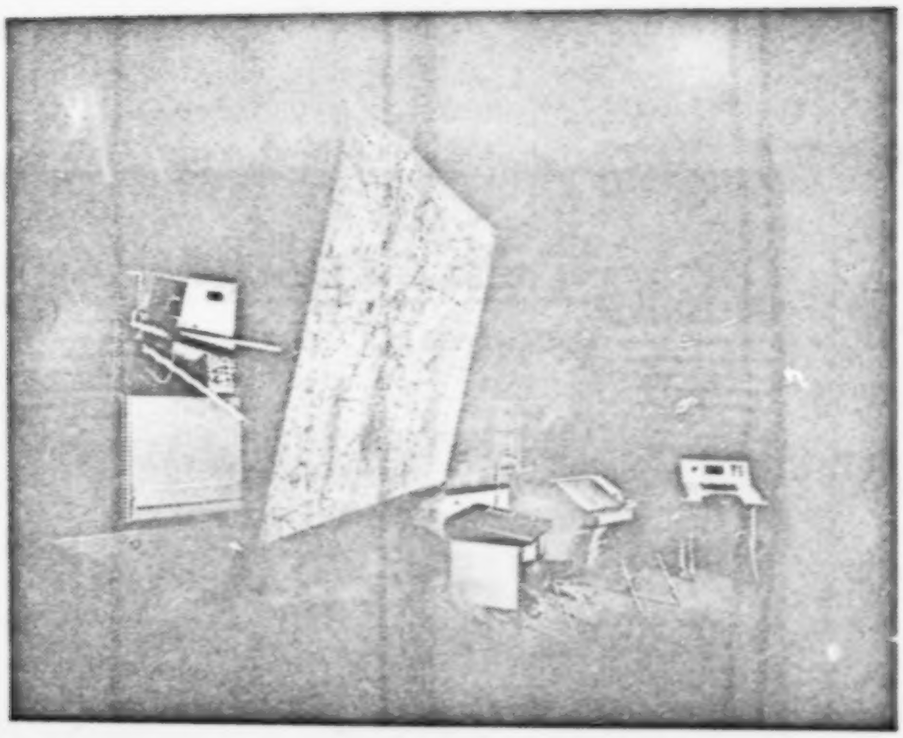


Fig 135a Aeronutronic – portable display for military use

Neg. No. 1249

Ch. ____ Page ____

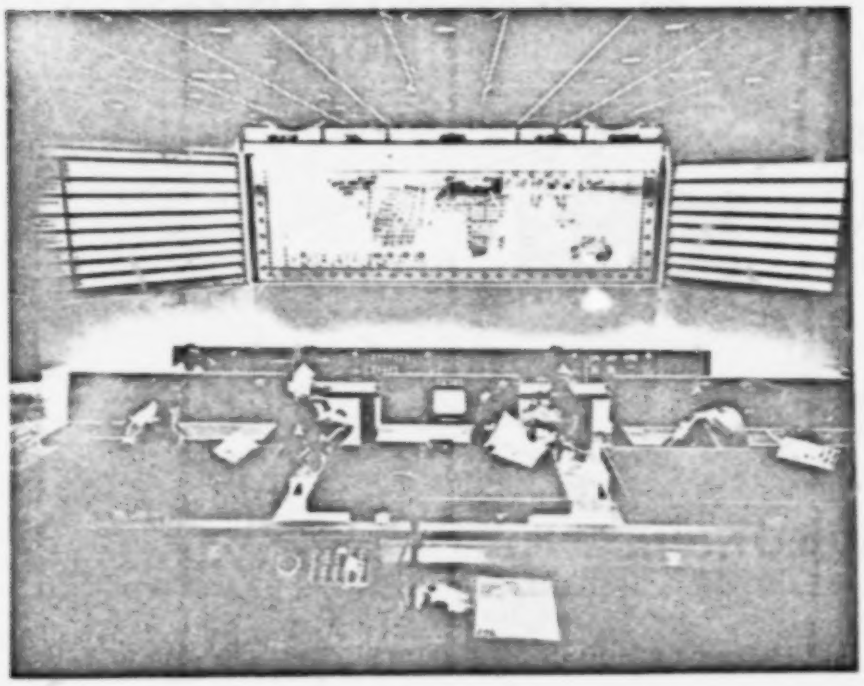


Fig 136

GENERAL DYNAMICS — control center and display used for the Astronaut flights

Neg No 161

Ch._____ Page_____

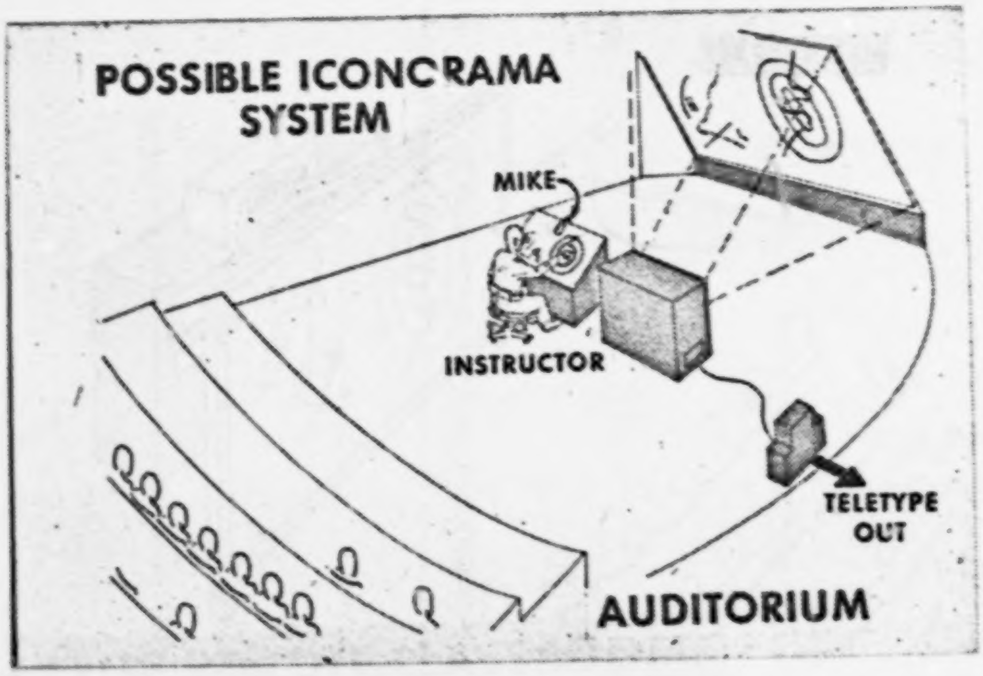


Fig 136c Fenske, Fedrick, & Miller — Iconorama system employs slides and overlays generated by instructor in classroom

Neg. No. 2003

Ch. _____ Page _____

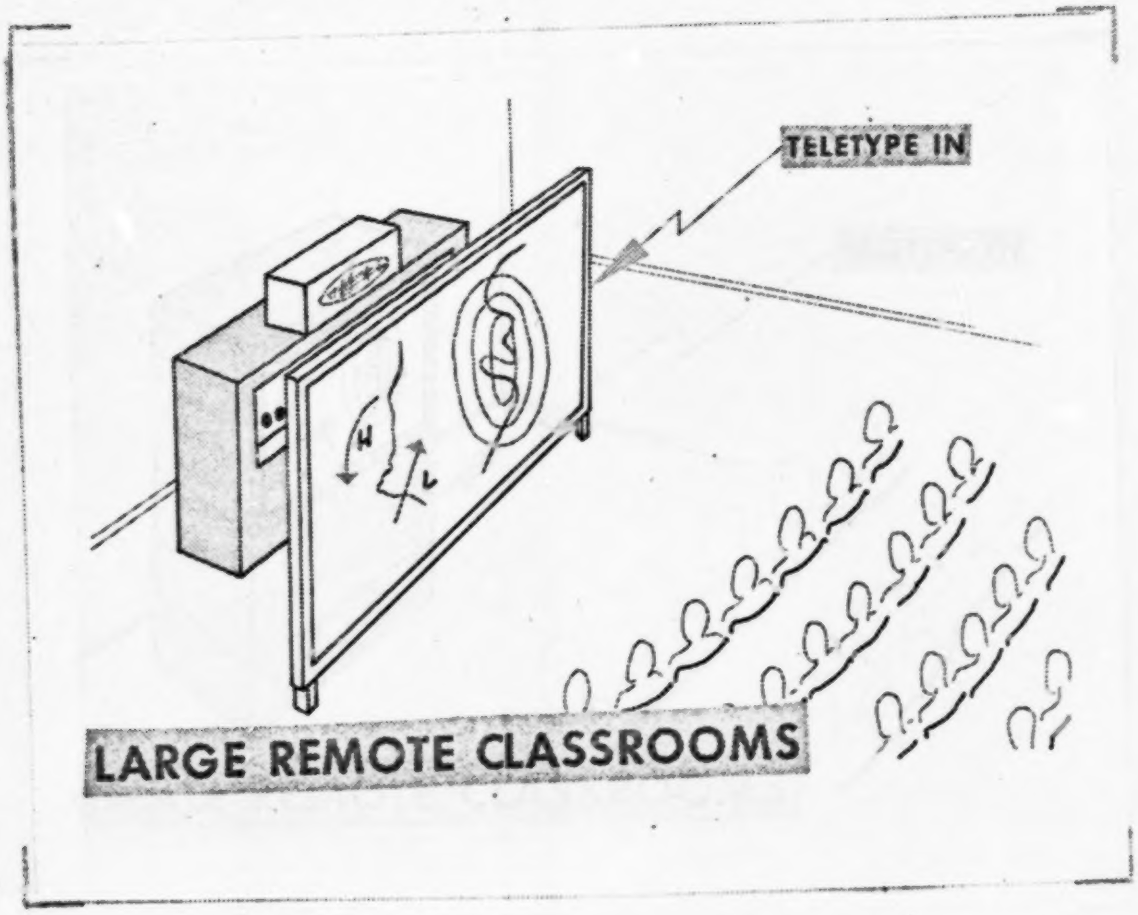


Fig 136b FENSKE, FEDRICK, + MILLER — Iconorama System

Neg. No. 1046

Ch. ____ Page ____

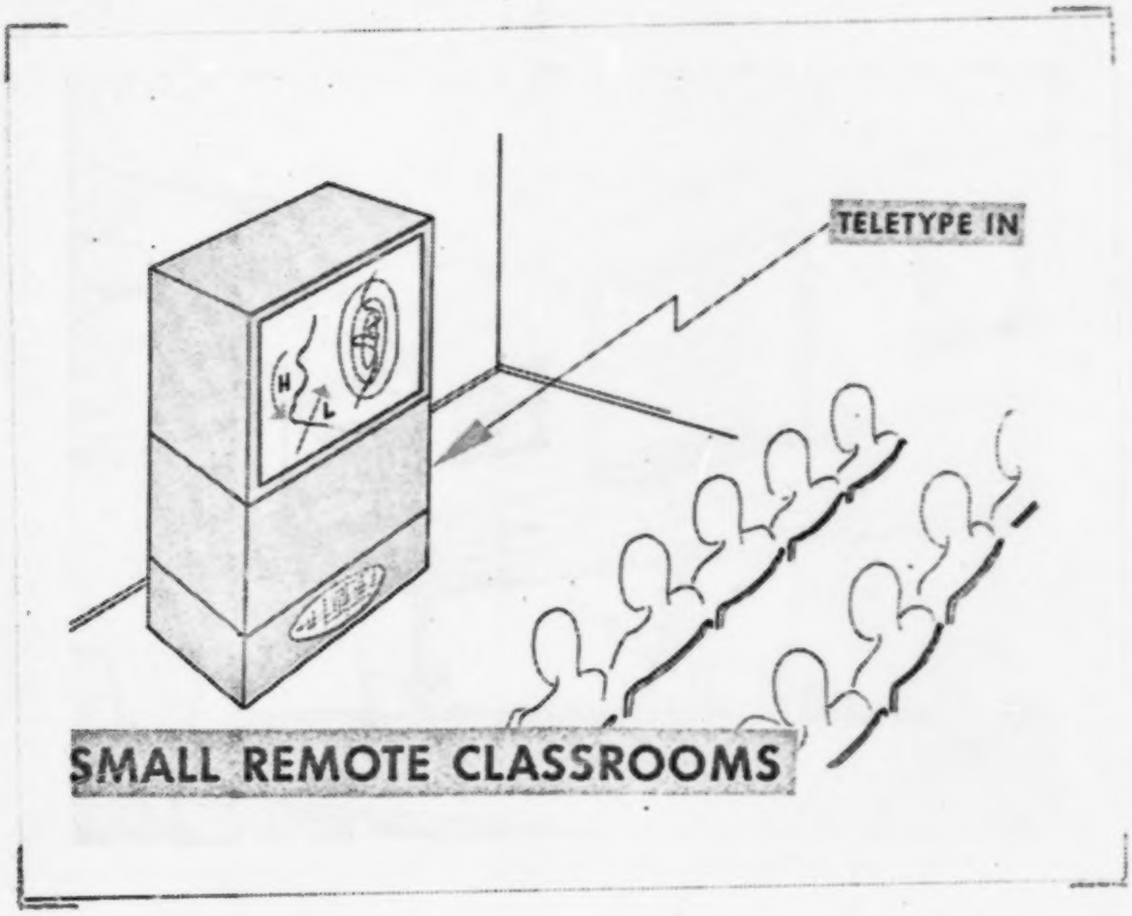


Fig 136a Feinske, Fedrick, & Miller — Iconorama system can feed remote display units.

Neg. No. 1045

Ch _____ Page _____

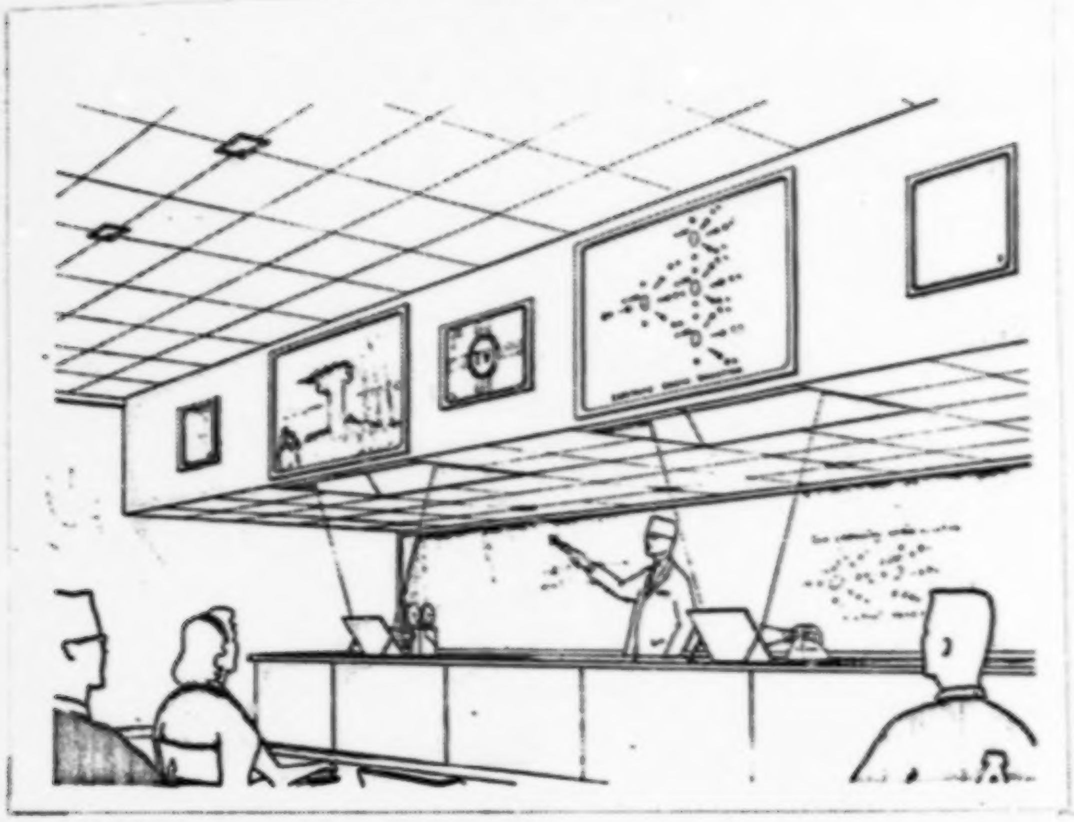


Fig. 137

Caudill — concept of a future classroom

Neg. No. ~~708~~ 1047